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# ***JPRS Report***

# **Soviet Union**

## ***Economic Affairs***

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# Soviet Union

## Economic Affairs

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## ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

### Abalkin's Career, Critics Analyzed

904A0324A Moscow NEDELYA in Russian  
No 14, 2-8 Apr 90 pp 2-3

[Article by Boris Bagaryatskiy and Mikhail Leontyev:  
"Who Is Bothered by Abalkin?"]

[Text] During his inauguration, at the very height of the ceremonies, the Polish prime minister Tadeusz Mazowiecki fainted. It took 40 minutes to bring him back to consciousness. Our leaders are presumably tougher. To be sure, some have suffered a failure of nerve, but not Nikolay Ivanovich Ryzhkov, nor any of his deputies has so far fainted in public—and may God give them good health.... Yet one could almost strike a good journalistic tone, for example, by making something of the sorrowful expression on the face of Leonid Ivanovich Abalkin, member of the academy, deputy chairman of the Council of Ministers, and chairman of the State Commission for the Economic Reform.

Few deputies of the head of the Soviet Government can boast of Abalkin's "quotability index." Abalkin has passed the group of leaders in his popularity or, more accurately, in the frequency with which he is mentioned in the press, and also with the intensity with which he gets picked to pieces in private conversations. To be sure, this is a popularity that has a minus sign in front of it. But that is the fate of all official liberals in Russia—people who have run the risk of assuming the burden of responsibility for implementing the economic "reform from above," which, as we know even from our schoolbooks, is a "by-product of a revolutionary situation." Of a situation in which liberal reformers are condemned—by commitment, by the nature of the only link that binds them together—to hold a rapidly polarizing society back from an explosion of emotions, inevitably ending up the target of attacks from radicals on the left and conservatives on the right. At one and the same time.

Is it an accident that Leonid Ivanovich Abalkin, member of the academy, should hold the position of "official liberal" in the government?

Personnel is a totally subjective business and does not lend itself to formalization. Especially in the government, when one must choose a man for one of the leading roles. Just recall (the echoes even get to our newspapers) how Western journalists rack their brains trying to understand why some particular person has turned up on the president's new team.

What could have made the difference in Abalkin's case? That he is director of the Economics Institute of the Academy of Sciences, which is considered the main institution of the reform? Of course....

Abalkin is the author of many monographs which have not lost their value even today, he has originated a

number of important scientific terms. For example, the term "economic mechanism," which is very much in use even now and which Abalkin established in the early seventies. At that time, when the main, if not the only function of economic science was to interpret the instructions of the top leadership, Abalkin provided the most "progressive" interpretations. But as a matter of fact he has always been quite close to the market advocates. To be sure, those who understood him played it down, and Abalkin himself did not go looking for trouble.

It was his sharply critical speech at the 19th Party Conference, a speech that was absolutely extraordinary for the time, that brought the academician political recognizability. For some reason, many people now believe that Abalkin was at that time advocating a multiparty system "from that high position of authority." No, he does not have that "sin" behind him. What he said was literally this: "This is our last chance to prove the capability of the one-party system." But the focus of that speech was elsewhere. Abalkin was the first to speak about the economic upheavals that were threatening. Many people were vividly shocked by that forecast, and this is understandable. On the surface things were still going normally. And at that time many people still did not know what Abalkin already knew.... For instance, none of the denouncers of the "official course" who are now well-known had anything of the kind to say at that time. If, let us suppose, they did not have that opportunity at the conference, then "lower" platforms gave that opportunity to them more than once.

But there was also another event which could not have failed to play a role when the choice fell precisely on Abalkin. In January '89, Abalkin presented the report of the Economics Institute in the Presidium of the Council of Ministers—"Recommendations for Improving the Economic Reform Being Carried Out in the Country." Without going so far as to say that this was probably the first case since the time of Lenin and Krzhizhanovskiy that representatives of science have been invited to speak to such an audience, it still was surely the first attempt to present the concept of the market as a totality of diverse economic structures to the country's top economic leaders gathered together.

They carried on the discussion for 8 hours—far longer than it took to deliver the report. And it was not, of course, all praise. Usually, they advised against dramatizing the situation and complained that blows to the reform would be dealt by the scientists.... To be honest, even today, just a year later, it is already embarrassing to read some of the statements.

We must suppose that Leonid Ivanovich responded in his customary manner—with thoroughness, very respectfully, not in a hurry. He was persuasive. Although it is doubtful that he managed that very day to convince all of his listeners—members of the Presidium of the Council of Ministers, ministers, and their deputies. For all the respect for science that exists in our society, our

leadership, like all practitioners (and our Council of Ministers, whatever you say, is a senate made up of practitioners), takes itself seriously. And a man who takes himself seriously does not trust even a member of the academy at first. Arguments that carried considerable weight were needed. Reality itself—quite opportunely—immediately began to supply them. It became clear that Abalkin's forecasts, those he had made at the party conference, were coming true. What is more, whether you liked or disliked the scientist's market-oriented attitude, whether you were convinced or not convinced, the fact remains, none of the antimarket people had advanced anything like a conception or a plan of action. Neither then nor later.

This, then, is the set of circumstances that probably served as the reason why the post of deputy chairman of the USSR Council of Ministers was offered to Leonid Ivanovich Abalkin half a year later.

You cannot just go and proclaim the market. Rome was not built in a day. The same applies to economic structures. The movement toward the market, the growth of the market, takes time. It will take years before an economic structure new to us begins to really operate, before really civilized enterprise springs up, securities are negotiated, people acquire a taste for purchasing them, before "market people" gain experience, before the top level of the market begins—the stock exchange (incidentally, for some reason it is precisely this—the time factor—that the opponents do not like to mention whether they come "from the right" or "from the left"). Which means that there will be no market tomorrow nor the day after tomorrow. But there will be a long stage-by-stage transition to it, with inevitable social differentiation and distortions, because all of this has to be built from scratch and in essence for the first time; after all, no one in the world has yet traveled the road from an administrated economy to a planned-market economy.

Does the government understand that? Is this something that Abalkin, its "main economic ideologue," is thinking about? And what kind of a man is he anyway?

We have kept in our notebooks a description of Abalkin given by one of his colleagues, a scientist who has known him for 35 years: "Abalkin is a man of unvarying decency." A phrase like that is a find for a journalist, but it has to be proven.

Here are several more jottings from the notebooks—one after the other. They can be taken on faith. They can be given some importance or regarded as of little importance. But we still would like to present them.

In agreeing to the office of vice premier, Abalkin categorically insisted that he also retain his job at the institute. The idle talk that sprang up quickly died out. Abalkin runs his sector—economic theory—just as he did before. He presides over council meetings. He advises the young. The institute did, of course, lose something when its director "took on a second job." But, of course, it also gained.

The Council of Ministers has gained even more. With Abalkin's arrival in the Kremlin, the entire institute began as a matter of fact to work for the Commission for the Economic Reform, for the government. Nor is it alone in this. We never before have had such a close and informal collaboration between the government and science.

Yet Abalkin has remained just what he was. Just as punctual, just as democratic, more ready to listen—even to people without academic degrees—than to speak. As for completely mundane things, having become a member of the government, he neither acquired a dacha from the Council of Ministers, nor did he change apartments. So, he lives in the same place where he lived before, in an old multistory building, on one of Moscow's noisiest main streets with the worst fumes from exhaust gas.... But not many people are interested in that.

People who have worked with Abalkin for a long time say: "Abalkin is a man of the most profound intelligence, calm, not in a hurry, not expansive. A chess player." We would like to add to this that he gives the impression of an extremely responsible person. We might mention just one of his recent interviews. The newspaper correspondent asked him: "What is your assessment of the Polish experiment?"

The context of the question is clear. The situation in Poland has begun to stabilize. Inflation is still high, but there are now goods on the shelves. The lines have disappeared. The official exchange rate of the dollar and the rate on the black market have equalized—something unheard of for a socialist country. You would think that this would be an example that could not fail to inspire Abalkin the "market advocate." Abalkin does indeed reply that his assessment of the intermediate successes of Poland is very optimistic. "Do you think that any conclusions might be drawn for the Soviet Union?" the correspondent insisted.

"Some perhaps, but the structures are very inappropriate," Abalkin replied. "...In Poland, there is a government which enjoys the kind of national support which does not exist in the Soviet Union.... In our context, we may confront a situation in which when food prices are doubled or tripled, the kolkhozes simply would not increase food production, but would go on selling the same volume of output or a smaller volume for the higher price.... In my opinion, there is no direct analogy, there is no ready-made formula."

And he went on: "In Poland, they ended up with 60,000 unemployed. We will have more if we go at that pace. We have to be ready for that, we have to be prepared in advance...."

The implication of these sentences is complicated. Let us try to figure it out. Abalkin is a specialist in macroeconomic systems. For him, then, the pattern of what is happening is obvious (the laws of economics are just as universal as the laws of matter), and he knows how

things will go for a time yet and how the economic mechanism will react to specific measures. As a specialist, he understands the inevitability of new difficulties ("We will have more unemployed"). But as a scientist, as a humanist, finally, he is concerned about mitigating the undesirable effect ("Preparations have to be made in advance"). Not put history back to sleep, but soften the blows and traumas that are inevitable in rapid changes of direction. It has become almost de rigueur to accuse the commission Abalkin heads of slowness or, without mincing words, to curse it for unpopular measures. But what other way out is there? To go back again, tightening all the administrative screws still more? But it must have become clear to everyone where that leads?! To dive headlong into market relations, as the radicals are calling for? But is the country ready for them, for those relations, when it does not even have "market" legislation, nor the appropriate economic structures (according to calculations of the scientists, it will take between 2 and 5 years to create them)? And the main thing is that by no means everyone is ready to fight for the market.

Solid preparation has to be made for the movement toward the market, and that preparation, invisible to everyone, began immediately upon Abalkin's joining the government. In October 1989, a broad scientific conference was called, one of the most representative, at which the comprehensive conception of the transition to the market was proposed for the first time. That conception was soon examined by the government.

By no means all of the measures for the recovery of our economy that it presents are popular. But in the situation in which the country finds itself today, unpopular measures are inevitable. The whole question is why they are not working? But can they work in a context of indefiniteness, when the reform quails like a man who has to go through the mud—he lifts his foot, but he does not know where to step. He is afraid. Which means that we have to make the transition to the market more rapidly. More rapidly, but not headlong, not this very moment, although it is also clear that it should not be done in 2 or 3 years.... How and when—these are now the main job of the commission and Abalkin's main concern.

Surely this is also Abalkin's main trait, the one that explains the logic of his behavior in his government post. We would call it "responsible radicalism."...

And another consideration. For many people, Abalkin personifies all the measures of the government in the area of the economic reform. This is a peculiarity of mass perception. ("The crowd loves the system," Lev Tolstoy remarked.) Although it is obvious that when Abalkin was appointed deputy chairman, he was not endowed with the powers of an economic dictator whom the other leaders would obey unquestioningly. Rather the other way about.

Surely many solutions—we will not venture to judge whether a majority or minority—presented by the Commission for the Economic Reform will be accompanied "with a fight." For instance, it is difficult to imagine that Abalkin has had no serious opposition in the Kremlin. But nowhere, not even among his own people in the institute, has Abalkin even once allowed himself to utter anything about disagreements of any kind. The vice premier intrinsically has something which we might call an old-fashioned "oath of allegiance." This makes him even more a target for attacks from "those of like reformist mind." Abalkin, normal decent man that he is, does not separate himself from the government, and he thus shares full responsibility for its "unpopular," and frequently even inconsistent measures. This, however, does not stand in his way, it is said, when in conferences at the highest level, whatever it might cost, he says, not loudly, but with sufficient firmness, "no, I do not agree," and insists that they not forget to enter this statement in the minutes.

Until recently, it was only our government that took responsibility for economic policy, and that means responsibility for the economic situation as a whole. Never anywhere has an opposition been particularly inclined to share responsibility with the government. But in our case, in our situation, the lack of political culture is acute, the opposition consists of flanks that are rapidly swelling with impatience, and at present they show no interest in responsibility.

Another particular aspect of the political situation is that we have not managed in our country to set up a normal "pendulum": the liberals leave, the conservatives take over, the conservatives leave, the liberals take over, and so on. But both of them, when they take their leave, still remain. In politics. In history. What is happening in our country right now is a "game of getting the opponent." Neither those on "the left," nor—even less—those on "the right" represent a position where, if they win, after a time they would have to be accountable to their former opponents for the consequences of their plans and projects.

The reformists cannot but feel this game of elimination. Abalkin is doomed to go to the end. The very appearance of the commission, the support given it both in the congress and in other responsible circles, however paradoxical it might seem, presuppose the unenviable role of the "switchman," onto whom public dissatisfaction can be transferred at the necessary moment. Should the reform fail, this obviously would be a defeat for its theoreticians and leaders, that at best would signify their political death.

The price has to be paid for the transition to the market, Abalkin says. But his opponents are either silent about this or they simply reject it. But we have to be honest, he says, we have to answer the question Who is going to pay, how much, to whom, and over what time? And all of this requires serious and thorough calculations. The

opposition has not been doing calculations of that kind, so that all that is left to it is to criticize.

People like Abalkin are always getting in someone's way.

In whose way?

The most general complaint from "the left" is that the reform is not radical enough, it is a halfway measure, its pace is sluggish. The critics give the government deadlines: a year, half a year, a month....

Here is what is important here. A kind of differentiation has already been noted in the camp of "left-wing" opponents. The complaints of the political radicalists of populist stamp are becoming more like ultimatums, frequently displaying a textual coincidence with the demands of those on the right (appeals in rallies for a fight against the mafia, against "those who have sold out the country"). The most glaring example is the scandal with the ANT, in which those on the extreme right and those on the extreme left acted practically in unison.

On the other hand, among authoritative market-oriented economists there is an evident trend toward consistent cooperation with the government and with the Abalkin commission. It would be hard to imagine that Shatalin and Shmelev, openly critical of the government, do not understand the difference between their position and that of Abalkin, that is, the difference between liberal critics and the official liberal.... "Woe betide a government which does not listen to its opposition. Woe betide that opposition when it does not put itself in the position of the government" (A. Solzhenitsyn). Which is why the criticism coming from them has been increasingly constructive, increasingly involved. This camp is typified by its pressure, its frontal attack on the policy of the reforms as a whole and personally on the reform politicians.

The antimarket critics not only represent a great variety of political shades, they are also very malicious. In any case, "Abalkinization of the economy," "Abalkogenocide," and other charitable new coinages indicate a somewhat overexcited state of their authors.

One of the loudest exponents of the conservative-preservationist opposition to the reform is the OFT—United Workers Front. Its support lies in two different social groups whose interests are directly affected by economic perestroyka. First of all, there is the large number of managers in the economy of the old stamp.

Objectively experiencing inconveniences from the anti-inflationary measures of the government (for example, that same "3-percent limitation"), they make believe in public that they do not understand why all this is necessary. Charity begins at home....but the irritation, the resentment, has to be vented, taken out on someone—personally. Someone has to be blamed. If only to take the "enemy" to task in public, out loud. For millions of such critics, the most suitable figure from a psychological viewpoint is Abalkin. What is he—a

member of the academy, a scientist. What do people like that understand about our difficulties?

Another advantage is that like any profoundly decent person, like any truly Russian intellectual, he is more inclined to take the criticism however vehement and unfair it might be, than to refute it like a shot, and in any case he could not allow himself the luxury of wasting time in attacks and counterattacks.

And also because in his way he is unprotected—an ideal target for any kind of attack both "from the left" and also "from the right"!

The so-called apparatchiks belong to this same group. It is a quite mistaken view of them that they are bribe-takers and self-seekers concerned only about their privileges.

Strictly speaking, their position—those of them who have been taking and stealing—has indeed changed less than anything else. As a matter of fact, most of the notorious apparatchiks are neither cynics nor careerists, but people who sincerely believe that they are performing a mission, that the world rests on their shoulders. If only they should depart, it would all come tumbling down. And now a situation is shaping up where they are leaving, and nothing is tumbling down. That gives rise to a state of depression, profound—really—stress. It is a natural defensive reaction of the organism to look for a new ideology that would justify their existence in the world. That is the ideology of the powerful center, of the strong arm. And a sizable portion of this stratum is finding its salvation at the point of intersection between the ideas of nationalism and garrison socialism.

The second and far more numerous category consists of people employed at semiskilled labor, people who do not have full mastery of any occupation ("semiprofessionals"). This reference is not only to workers who have a low level of skill. "Semiprofessionals" are those who do not know how to do any job competently. They realize that if the situation changes, they lose in any case. Since they are a product of the system, they naturally are at the same time its most zealous defenders. For them, Abalkin is the personification of the "nightmare" of the market economy.

Both these categories, to whatever extent they might seem to be at opposite poles, have one thing in common: they are social dependents. No place is provided for them in a system of normal economic relations. So it is up to these people to remake themselves. And that is painful. Not everyone is capable of it. And this also has to be taken into account as the transition is made to the market.

Once we have understood this, we also understand why their camp has so far not produced any alternative economic program, not even one that sounded scientific, much less one that really was scientific. The "rightwingers" have not set themselves this task, nor could they, since, while they proclaim to be concerned about the

general good, in essence it is only their own good they are looking after. And with that kind of baggage you are not going to write any serious document.

Let us take a look: Our trade union ideologists and leaders, who quite recently were fighting for overfulfillment of the plan at any price, are now flirting with the workers from ultrapopulist positions. A. Sergeyev, professor in the Higher School of the Trade Union Movement, an acknowledged ideologue of the OFT, has been militating vigorously against the government measures to control wages: "The workingman has to be allowed to earn." It is interesting that quite recently, when he was working in the Economics Institute, Professor Sergeyev organized a conference on income not derived from work. In his report, he showed that figure padding represented the largest source of such income. And those who receive that unearned money are not the mysterious "businessmen in the shadow economy," but quite real workers.

Under the slogans of protecting the interests of the working class, attempts are being made to poison the workers against the economic reform. What cannot be legally stated on behalf of the trade union leadership is proclaimed in the rallies and leaflets of the OFT. Specifically—charges that the government, and that same Abalkin above all, is engaged in a "restoration of capitalism," in stimulating the shadow economy.

These "antireform" outlooks at the two poles of the social spectrum feed upon the same social stereotypes and traditions. It is utterly impossible to draw a clear line between them.

The craving for instant social justice, the search for the invisible enemy—the omnipotent mafia, the culprit responsible for all the social disorders, the embodiment of evil—unite the extreme currents of "left-wing" and "right-wing" ("democratic" and "conservative") populism and for all practical purposes erase the line between them. Many words (especially of an economic nature) which are uttered in the numerous "patriotic" meetings literally coincide with the appeals that resound at the crowded "democratic" rallies.

K. Kagalovskiy, candidate of economic sciences, very accurately summarized these attitudes in KOMMUNIST (No 4): "Because of rising social expectations and exhaustion of the 'credit of confidence,' the population expects from the country's leadership only solutions...which will bring some improvement, but not a single parameter of the standard of living may deteriorate. The population is not prepared to undertake 'temporary' sacrifices."

Is this reform of ours going to be overtaken by the destiny of previous ones?

Gorbachev's first speech as president aroused hope. Twice he used the word "radicalization" ("the obvious need for radicalization of political perestroika," "decisive steps are needed to radicalize the economic

reform"). This coincides directly with what the Commission for the Economic Reform is working on. We can assume that reformists at all levels are entering a new period in their effort.

### Social Benefits of Shareholding Viewed

904A0250A Moscow EKONOMICHESKIYE NAUKI in Russian No 2, Feb 90 pp 24-29

[Article by Nikolay Dmitriyevich Kolesov, doctor of economic sciences, professor, head of the Department of Political Economy at humanities faculties of Leningrad State University, and Pavel Viktorovich Vorobyev, assistant at the same department: "Shares and Joint-Stock Companies in the New Model of Management"]

[Text] The appearance of shares in the present Soviet economy poses a number of questions for economic theory. First of all: Are they needed at all under socialism? Next: What do shares in various social and economic systems have in common and in what should they differ from each other? Are shares a *common* form of movement of monetary assets, which is inherent in a high degree of development of commodity-money relationships in any formation? These and other questions (we do not attempt to give their list here) do not arise for the first time. Let us turn to our history.

As is well known, ukases on the curtailment of joint-stock companies were among the first measures of the Soviet Government. At the beginning of 1919 the decree of the Council of People's Commissars annulled stocks and shares of joint-stock companies and partnerships, whose enterprises were nationalized. Nevertheless, the national economy of that time managed without joint-stock companies not long—less than 3 years. As soon as the market began to develop and the economy revived, joint-stock companies began to appear anew. And not merely to appear, but to develop rapidly. The first Soviet joint-stock company of the New Economic Policy period appeared on 1 February 1922 and as early as 8 March 1925 an especially created joint-stock department of the People's Commissariat of Internal Trade reported through the newspaper EKONOMICHESKAYA ZHIZN that among the newly formed 107 joint-stock companies there were 40 companies with state capital, 20, with private capital, 35 mixed joint-stock companies, and 12, with the participation of foreign capital. According to the nature of the prescribed tasks, pure trade enterprises (their share comprised 34.6 percent) and trade and industrial enterprises (30.8 percent respectively) predominated. As it seems to us, the cited figures reflect a legitimate process: The joint-stock form of management is inherent in developing (and developed) commodity-money relationships and in itself this fact does not depend on the framework of the social system in which they exist. Nor is this form contraindicated to socialism. Consequently, the ever more obvious circumstance that, as our economic mechanism is now restructured radically (and consequently, the place of commodity-money relationships expands and their role intensifies), the

problem of shares and joint-stock companies rises again and begins to be solved in one way or another by the course of events itself. This, we stress, is by no means their accidental "splash." We are at the initial stage of a new era of shareholding in our country. That is why article 18—"Property of the Joint-Stock Company"—treated as one of the forms of collective property also occupies its place in the USSR draft law "On Property in the USSR." A number of enterprises have already issued securities. True, the view that presently distributed securities are not shares at all, but a kind of symbiosis of shares, stocks, and bonds, has been expressed in the press recently<sup>1</sup>. Yes, approaching the matter with a classic criterion, we must admit: Our present phenomenon can be called a share only with a great deal of conditionality. However, it should be taken into account that by "classic" we mean, even if involuntarily, the model created by joint-stock management under capitalism. Such a model should not and cannot be reproduced exactly in the socialist economy. There is a need for another approach not oriented toward "models," in which the chief thing is to determine the functions of shares in the modern economic life of socialist society and, accordingly, to define more precisely who can own them.

We will dwell at greater length on two types of shares, whose appearance is based on the decree dated 15 October 1988 of the USSR Council of Ministers<sup>2</sup>: shares of the labor collective and shares of the enterprise. If shares of the second type are distributed among enterprises, the question of the right of purchase as applied to shares of the labor collective is not so indisputable. For now it is assumed that shares of the labor collective are distributed only among its members. At the same time, there is an opinion that it is not advisable to limit the range of shareholders to workers at a corresponding enterprise. Nevertheless, to whom can the issued stocks be sold—only to the enterprise's own workers, or to any individuals? In other words, what should the joint-stock enterprise be—open or closed? Nor did the authors of the draft law on property in the USSR give a ready answer to this question. Point 4 of article 18 of the draft law states that "citizens can participate in a joint-stock company if another thing is not stipulated by the legislation of the USSR and Union republics." An impression is created that a step toward an open joint-stock enterprise has been taken here, but it can be weakened and even completely nullified at any moment if legislation—even not only all-Union, but also republic—"stipulates another thing." Incidentally, we would like to note that, according to the USSR Law on Cooperatives (article 22, point 4) in effect, cooperatives are not limited in the range of their possible shareholders. During the purchase of cooperative shares only the priority of its members is stipulated.

In order to answer the raised question as applied to state enterprises, it is necessary to define more precisely what, in general, is the purpose of issue of shares by them? We will try to turn again to the experience of the 1920's. At that time "the state was forced to resort to making its

enterprises joint-stock enterprises in order to draw private capital into them and, moreover, in order to give them the opportunity to work on so-called 'cost accounting,' because the maximum accuracy of the property position of enterprises is the prerequisite for this opportunity... and the joint-stock form guaranteed such accuracy to a much greater extent than the obscure figures of a trust, a syndicate, and so forth."<sup>3</sup> Great importance was attached to the fact that the joint-stock company "is convenient for control and guaranteed against the possibility of improper taxation."<sup>4</sup> These circumstances also remain weighty now. Nevertheless, in our opinion, at the present stage in the development of socialism shares are intended to contribute mainly to the accomplishment of two key tasks.<sup>5</sup>

First, widely drawing temporarily available monetary assets into the production turnover; second, activating man—the main moving force, meaning, and purpose of perestroika. From the standpoint of the specific essence of socialism, both these tasks should be considered in an indissoluble unity. Taking such an approach, in our opinion, it is necessary to come out against the proposals to sell shares openly, that is, to all those who want them. The arguments of advocates of an open sale of shares are as follows: First, the Savings Bank sells bonds and pays interest on deposits to everyone without exception. Why should we not act in the same way with respect to the sale of shares? Second, there is no need to arouse fear based on the assumption that, allegedly, a stratum of rentiers will appear. There is no such threat. In fact, according to calculations, it is possible to live comfortably, without working, on income from shares alone only if shares worth 180,000 rubles are bought.<sup>6</sup> We will say right away that the second argument is hardly serious if we take into account that 3 percent of the Savings Bank depositors own the same sum of deposits as the remaining 97 percent.<sup>7</sup> At the same time, the biggest deposit among those in the Savings Bank does not exceed 200,000 rubles and only a handful will be able to purchase shares for a sum sufficient for a carefree life.

However, it is not a matter of these far-fetched fears. We are against the sale of shares to all those who want them not at all only because someone will receive too big an income not directly connected with the invested labor. We want to draw attention to something else: The Savings Bank and the joint-stock enterprise should not be confused. If it is only a matter of investing money somewhere, for this there are the Savings Bank and commercial banks. Why are joint-stock companies also needed for this? Obviously, there is no need for them here, especially as in the Savings Bank the depositor is guaranteed to receive his interest in any case, whereas in the joint-stock company, only if its operation is profitable. True, it is stressed that this interest can be higher than that computed on deposits. However, it can also be lower and losses are by no means ruled out.

It seems that advocates of a free sale of shares do not take into account how and why the idea of shareholding has

arisen under socialism. According to our belief, if joint-stock production companies are of an open nature, the share as a social and economic phenomenon of socialism, while retaining the economic meaning, will lose the social meaning. We repeat: Money can be invested in the bank right now. In this the economic meaning of the share coincides with the deposit (especially as the rates of payments on deposits in the Savings Bank are becoming more flexible). However, the share provides the unique opportunity, along with an efficient investment of money, to activate the worker, to increase his responsibility for his area of work, and to try to find another method of solving the problem of transforming the featureless "coowner" without rights into a true owner. Precisely in this we see the *social meaning* of shares. However, in our opinion, the unity of social and economic principles determines the new *socialist content* of the "share" category.

The new content of the category also predetermines the new approach to its determining signs. While retaining the features characteristic of shares in general (first of all, dividend payment), under the conditions of socialism the share also acquires new ones. First of all, it is a matter of the *nature* of income from shares. If only workers at a joint-stock enterprise have the right to buy the shares of a labor collective, in our opinion, the labor nature of income from shares does not evoke any doubts. In this case we deal only with the form of profit redistribution in favor of enterprise workers. In this connection we would like to note that we consider the decision stipulated by the mentioned decree on the payment of dividends from the material incentive fund, not from profit, unsuccessful. It remains to be hoped that the USSR Council of Ministers will take into account the criticism addressed at it during the drafting of the USSR Law on Joint-Stock Enterprises. In case of an open sale of shares it is more complicated to evaluate the nature of income. Apparently, this will require a special investigation as applied to a specific situation.

We repeat that, in our opinion, there is no acute need for such a sale, at least now. In any case it should be preceded by the development of a network of joint-stock banks, where the nature of income from shares would be similar to the nature of income from deposits in the Savings Bank, lottery winnings, and so forth.

Now, however, it is most important to activate the worker and this can be done by distributing shares within the labor collective. However, even with such a solution of the problem it cannot be considered that the observance of requirements for social justice is ensured in advance.

In our opinion, the sum of shares at their owner's disposal should not affect the number of votes cast by him at general meetings of shareholders. Any stockholder can have only one vote. Moreover, as we believe, any other worker at a given enterprise, even if he does

not have shares, should have the same right of participation in these meetings. This will create equal opportunities for all workers in enterprise management. Incidentally, similar views can be found in the economic literature from the 1920's: "Limitation on the number of shares belonging to individual members and limitation on members' right to receive dividends are undesirable. The draft charter should only have a directive for a limitation on the number of votes of partnership members at general meetings (no more than five votes) irrespective of the number of shares taken by them."<sup>8</sup> The meeting of shareholders represents a new form of self-management—no longer a particularly organizational, but economically reinforced, form. True, it should be taken into account that this form in itself does not guarantee true independence for an enterprise. As the sad experience of the 1920's shows, joint-stock companies can be subject to a strong and, ultimately, shattering pressure on the part of central economic bodies.

The second type of shares stipulated by the decree of the USSR Council of Ministers are enterprise shares. They can contribute to the solution of a problem surprisingly similar to the one that existed in the 1920's. For example, during those years S. Braude noted that associations of state industrial enterprises in the form of joint-stock companies were extremely rare: "... We have seemingly closed ourselves into a single form of association (trust—N. K. and P. V.) despite the demands of life, which puts forward other, changed, special forms of activity of industrial enterprises."<sup>9</sup> These words written exactly 65 years ago have not lost their topicality. We have really locked ourselves into a virtually single form of industrial enterprise—the production association (NPO)—and under agricultural conditions—the kolkhoz (sovkhоз). Presently established concerns, leasing of enterprises by their collectives, and other forms are making the first breaches in the uniform and obsolete structure of the national economy. Joint-stock companies should also receive their place in the new structure. An analysis of joint-stock companies of the 1920's shows that the bulk of the stocks was distributed among state enterprises and departments, which were interested in the activity of any joint-stock company and, owing to this interest, deposited part of their own profit in it. For example, in 75 joint-stock companies the capital belonging to the USSR Supreme Council of the National Economy made up 41.5 percent of the total sum of their authorized capital and the capital of people's commissariats of internal trade, foreign trade, and railways, 23.9, 4.5, and 6.9 percent respectively. Thus, the indicated departments were the biggest shareholders. The state capital as a whole made up 94.1 percent of the capital of mixed joint-stock companies.<sup>10</sup> In our opinion, there is truth in the statements that joint-stock companies with the participation or even with the predominance of state capital in the political and economic sense signify a denial of the state form of property. However, this denial is within the framework and by means of state and public property. It seems that it is

necessary to support the provision recorded in point 3 of article 18 of the draft law on property to the effect that shareholders can be state bodies, enterprises, organizations, institutions, cooperative and other public organizations, workers' associations (collective enterprises), and joint-stock companies." Such "many-sidedness" of shareholders with their general socialist nature should ensure stable progress of joint-stock management in our society.

It is necessary to dwell on another key aspect of shareholding processes in the socialist economy.

The experience of the 1920's shows that the issue of shares cannot fail to affect the credit system. For example, the Industrial Bank, which was established on a joint-stock basis, by 1922 issued 134,167 shares, which gave 49,526 votes, of which 4,100 shares (8,200 votes) belonged to the Supreme Council of the National Economy. The major banks of all-Union importance, along with the State Bank, included all five joint-stock commercial banks: The Industrial Bank, the Russian Commercial Bank, the Far Eastern Bank, the Asian Bank, and the South-Eastern Bank. Whereas in October 1922 five joint-stock banks had only five affiliates, in October 1924 they had 95.<sup>11</sup> In January 1925 the Union Council of People's Commissars approved the charter of another joint-stock bank—the Central Bank for Municipal Services and Housing Construction. Its basic capital totaled 40 million rubles in gold, of which 51 percent belonged to state enterprises. The 400,000 shares issued by the bank were comparatively inexpensive—100 rubles each, which gave many people, who wanted them, access to them<sup>12</sup> and, consequently, differentiated this bank advantageously from the present Bank for Housing and Municipal Services and Social Development.

In what do we see the advantages of shareholding in the credit sphere? Today the situation is such that, in fact, the bank has a monopoly predetermining the financial policy of enterprises. Under self-financing conditions this has become a hindrance to the further development of their independence. At the same time, control over the financial activity of enterprises is still necessary. In our opinion, precisely the joint-stock bank established by a number of enterprises related either on a territorial or a sectorial basis, or—what is better—on both, will help to overcome this contradiction. Controlling the work of every enterprise credited by it, the joint-stock bank itself will be under the strict control of the association of founding enterprises. Such banks are already being established. For example, a concern, which includes a commercial bank established on a joint-stock basis, is expanding its work in Estonia at the base of the republic's Ministry of Light Industry. It was formed through the distribution of shares among the concern's enterprises and cooperatives. Since the bank enters the structure of the latter, naturally, it is interested in the successful work of both the concern as a whole and each of its enterprises. A similar bank operates at the Leningrad Tekhnokhim Concern. A joint-stock credit clearance

center has been established at the base of Glavvladimirstroy and commercial banks function at cooperatives. This process continues to gather strength.

The advantage of the examined type of shareholding also lies in the fact that such banks become real competitors of the Savings Bank and other sectorial state banks and eliminate monopolism in the credit sphere. In joint-stock credit institutions, as in the Savings Bank, there is a kind of avoidance of personal responsibility on the part of the borrower, especially in banks that finance so-called risky projects. The first such bank appeared in Leningrad in August 1988. The Leningrad innovative bank does not yet issue shares for sale to the population. However, it is clear that its shares should be sold openly, because the purchase of a "risky" bank's shares is approximately the same thing as the purchase of a lottery ticket: Risky projects by no means always bring profit.

If we proceed from the open nature of joint-stock companies under socialism, we inevitably face the question of the securities market. As is well known, such a market has already been established in China and is being actively formed in a number of socialist countries. Economists in these countries believe that "without a capital market, that is, without a developed system of commercial banks trading in capital and distributing stocks and bonds, it is impossible to speed up the movement of the means of production from unprofitable to profitable enterprises."<sup>13</sup> A stock exchange represents an objective need wherever there is a developed system of stocks and bonds, but one can realistically speak about it only if a normally functioning commodity market appears. In our opinion, an exchange, in any case at first, should be organized as a state-cooperative institution on a joint-stock basis. Such an exchange will give a field of activity only to state and cooperative organizations, not to private individuals. We will not touch on the problem of transfer of funds by means of a stock exchange, which deserves an independent investigation as applied to the socialist economy. However, right now it can be asserted that the establishment of a stock exchange signifies a real forward step along the path of transition from administrative to economic levers of economic management.

We have examined above two types of shares stipulated by the decree of the USSR Council of Ministers. It seems to us that other types are also possible, in particular, shares of local soviets. In connection with the formation of municipal property and granting of bigger rights to local soviets, the joint-stock method of attracting temporarily available funds of the population and enterprises for the needs of a rayon, city, and so forth is fully justified. Furthermore, the local soviet itself can buy shares of enterprises (including of those accountable to it) in order to affect their activity economically, not administratively.

In this article we have touched only on some aspects of shareholding under socialism. Apparently, this process will be of a gradual nature: Selling shares only to members of the labor collective of a joint-stock enterprise at

the initial stage, sooner or later we will come to an all-embracing stock exchange. That is precisely why right now it is necessary to thoroughly study the experience of other socialist countries, which have gone farther than us in this matter. A frank talk about the tendencies and contradictions in the circulation of securities in capitalist countries is needed. Apparently, it is worth more profoundly studying the history of formation and development of joint-stock companies in the USSR during the 1920's. All this will make it possible to approach in a more balanced way the processes of emission of shares and formation of joint-stock companies, which are unfolding in our country today.

#### Footnotes

1. See: Serebryakova, L., "Securities Market: Pluses and Minuses," *FINANSY I STATISTIKA SSSR*, No 6, 1989, p 7; Rozhkov, Yu., "Stocks and Shares," *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVVA*, No 7, 1989, p 28.
2. See: *EKONOMICHESKAYA GAZETA*, No 45, 1988.
3. "Aktionernyye obshchestva i tovarishchestva v torgovle i promyshlennosti" [Joint-Stock Companies and Partnerships in Trade and Industry], Moscow, 1921, p 8.
4. *EKONOMICHESKAYA ZHIZN*, 4 April 1925.
5. Among other reasons determining the appearance of shares the state debt, which has reached a significant scale, should also be mentioned. We will recall K. Marx's words to the effect that "the state debt created joint-stock companies..." (Marx, K. and Engels, F., "Soch." [Works], second edition, Vol 23, p 765).
6. See: Grigoryev, L., "We Are Becoming Shareholders," *MOSKOVSKIYE NOVOSTI*, 21 August 1988, p 11.
7. See: *ARGUMENTY I FAKTY*, No 25, 1988, p 7.
8. *EKONOMICHESKAYA ZHIZN*, 23 July 1925.
9. Braude, S., "Joint-Stock Companies as a Form of Unification of Industrial Enterprises," *MESTNAYA PROMYSHLENNOST I TORGOVLYA*, No 1, 1925, p 41.
10. See: *EKONOMICHESKAYA ZHIZN*, 8 March 1925.
11. See: Belousov, A., "Activity of Joint-Stock Banks in 1923-24," *VESTNIK FINANSOV*, No 1, 1925, pp 134 and 140.
12. See: Dyachenko, V. P., "Sovetskiye finansy v pervoy faze razvitiya sotsialisticheskogo gosudarstva" [Soviet Finances in the First Phase of Development of the Socialist State], Moscow, 1947, pp 378-380.
13. Borkovski, Yu., "Second Stage in Economic Reform in the Polish People's Republic," *VOPROSY*

*EKONOMIKI*, No 4, 1988, p 117; see also: "The Hungarian People's Republic: Bank Reform," *EKONOMICHESKAYA GAZETA*, No 20, 1988, p 17.

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#### INVESTMENT, PRICES, BUDGET, FINANCE

##### Lack of Data on Money Supply Hinders Fight Against Inflation

904A0221A Moscow *EKONOMIKA I ZHIZN* in Russian No 9, Feb 90 p 8

[Article by M. Titarev, senior scientific associate of the USSR Scientific Research Institute of Banks and RSFSR merited economist: "So How Much Money Do We Have?"]

[Text] Inflation, the devaluation of the ruble, the issue of surplus money, the inability to exchange money for goods...these problems cannot fail to trouble literally all of us. Indeed, money enables us to evaluate our labor. But how much of it should be in circulation? And to what extent is there a surplus in today's money supply? Since complete data on the volume, structure and dynamics of the money supply as well as on the basic parameters of money turnover are still not being published, many economists are trying to determine these figures themselves, based on their own calculations.

Let us take for example the analysis by O. Shvedovyy of the dynamics of the disequilibrium between the population's effective demand and the material satisfaction of that demand (in the journal *NASH SOVREMENNICK*, No. 10, 1989).

He compared, on the one hand, the population's aggregate income since 1961 and, on the other hand, allocated consumer goods and paid services. As a result of the comparison the conclusion was made that by the end of 1987 the population had amassed 645 billion rubles, including around 400 billion rubles in ready cash.

I will not hide the fact that if the method of calculation itself raised hopes, the result was highly troubling. I hesitate to say precisely what failed here—the statistical data provided by the author or the methodology used in making concrete calculations—but the final figure arrived at is not even approximately correct. The population has not had and does not have this kind of money. Today's aggregate holdings, as it would follow from a number of published statistics, are no higher than 450 billion. And that is taking into account the increase in the money supply among the population over the last two years by approximately 100 billion rubles. Of this money, around 340 billion rubles are in accounts in savings banks. So the figure quoted for the population's aggregate holdings appears to be overstated by almost two times and the amount of ready cash by almost five times.

Overstating the total amount of money at the population's disposal has in its turn affected the correctness of the indicators calculated by the author on the devaluation of the ruble. Indeed, he correlates with the mass of commodities an amount of money which is inflated by almost 300 billion rubles. In addition, excluded from the total sum for unclear reasons is that part which represents the population's real monetary savings and does not have to be immediately exchanged for goods. As a result of these and other inaccuracies, including those relating to calculating the price index, the real value of the ruble (which the author estimates at 26 kopecks) appears to be approximately 1.5 times lower, or two times lower in comparison to the consumer market conditions of 1987.

The monetary indices adduced by Doctor of Economic Sciences L. Braginskiy (OGONEK, No. 42, 1989) also raise a number of questions. What above all attracts attention is the nonidentical or, more precisely, contradictory character of some of the indicators. In one and the same paragraph (on p. 10) the essay at first asserts that "in circulation today in our economy are 3.3 trillion rubles of non-cash credits (i.e., money credited between enterprises) and more than 0.5 trillion in ready cash." And then it claims that "the entire money turnover comes to 4 trillion rubles in one year."

And further on the article argues that it is precisely the money turnover which "creates a material and financial imbalance—it is characteristic of inflation." However it is more legitimate to associate the imbalance as well as inflation precisely with the amount of money in circulation, and not with turnover. Indeed, the degree to which the monetary unit is devalued, which is characteristic of inflation, is determined, as we know, by the correlation between the money supply and the mass of commodities.

An analogous confusion of credit turnover and credit investments is also made. The author claims, for example, that "bank credit investments make up 2.5 trillion rubles in one year."

In reality this is not credit investment, but, apparently, the yearly turnover in credit allocated to the national economy. But credit is not only allocated: as we know, it is also repaid. The correlation between turnovers in the issue and repayment of credit allows us to determine the size of credit investments. Today they come to around 400 billion rubles.

The evaluation of the influence of the state budget deficit on economic imbalance and inflation is also incorrect. L. Braginskiy writes that the state budget deficit "makes up only three percent of the money turnover, and probably the same amount of the economy's imbalance."

This more than modest characterization of the state budget deficit is a direct result of comparing it not to monetary funds, but to the yearly turnover of those funds. Moreover, one should take into account that through the budget not 10 percent of the nation's money,

as the author writes, but more than 70 percent of national income will be redistributed.

How then can we appraise the extent of inflation and the devaluation of the ruble? The point of departure for clarifying these issues should be a determination of the volume of the total money supply, which can be done with a certain degree of accuracy through calculations.

As we know, today's money is by nature credit. In economic turnover it appears in the form of credit allocations and is withdrawn from circulation upon repayment. Therefore the total volume of money in circulation is equal to the size of all credit investments at any given moment.

Credit investments in the national economy, as has already been pointed out, today amount to about 400 billion rubles. Together with this, according to calculated data, at the present time there is an accumulation on the order of 370-380 billion rubles in bank credit allocated to the budget for a period of a number of years to discharge the deficit.

Therefore the total volume of all credit investments has reached almost 800 billion rubles. So the size of the entire money supply, of which approximately 110 billion rubles is in ready cash and around 700 billion rubles is in non-cash, approaches this limit.

Is that a lot or a little? Of course, 800 billion rubles is nothing like the four trillion L. Braginskiy points to. But even 800 billion is significantly higher than is needed for our economy today. Part of this money (in my estimates, a good 250-300 billion rubles) is surplus. It has accumulated gradually but increased in spurts over the last three to four years in connection with the sharp rise in the state budget deficit. This deficit is discharged mainly through the issue of money by means of allocated bank credit. This channel has recently become not only the primary means, but in a certain sense the only means of pumping surplus money into circulation. Indeed, direct credit investments in the national economy over a number of years have not only not increased, they have decreased. At the same time the share of credit allocated to the budget for discharging the deficit has now reached almost one half of all credit investments. It is responsible for no less than  $\frac{1}{3}$  of the accumulated surplus money. This is how the real influence of the state budget deficit on imbalance and inflation is determined (and not, of course, using these three percentage points mentioned in the article cited above).

As we see, one of the fundamental directions towards slowing inflationary processes is the decisive reduction of the state budget deficit. But of course in order to conquer inflation, we must have precise and reliable information about the processes involved in monetary circulation. For now we must content ourselves with figures which, as we see, lead to conclusions which are questionable and (which is particularly distressing) have little in common with reality.

**Roundtable Discusses Cost of Price Reform**

904A0339A Moscow PRAVITELSTVENNY VESTNIK  
in Russian No 18, Apr 90 pp 6-7

[Report on roundtable by Yu. Rytov: "Price of Price Reform"]

[Text] The USSR State Committee on Prices jointly with the editorial board of PRAVITELSTVENNY VESTNIK conducted a "roundtable" devoted to the transition to a regulated market economy and price formation problems. Leading specialists in this field—scientists and practical workers—took part in the talk. Today we publish fragments of the discussion held.

**V. Shprygin, doctor of economic sciences, director of the Scientific Research Institute of Prices:** The search for effective ways of constructing the market and saturating it with goods is now one of the most complex problems of perestroika and the creation of a price formation mechanism servicing it efficiently, one of the most urgent problems of economic reform. Unfortunately, the present theory of planned price formation is not very suitable for servicing the market and further developing commodity-money relationships, since it is based on obviously obsolete ideas. A new theory still has to be created.

Undoubtedly, the basic principle here lies in the fact that prices of goods should be set by their owners. The market is intended to correct them. Only under such conditions will it be possible to overcome the alienation of producers from the results of their labor. Therefore, the state can only set the prices of products owned by it. With regard to other products only the general rules and principles of price formation, including the list of goods, the sale of which is possible at free prices, or maximum price levels, should be determined. The regulating functions of the state in the system of market relations will be manifested in this.

In our opinion, the following price structure would be universal and suitable for all national economic sectors: firm state prices; state regulated prices; contractual prices; free prices.

Probably, market principles of price formation, first of all, will affect agriculture. After all, the laws on property and land, which have already been adopted, ensure a rapid development of commodity-money relationships precisely here. Therefore, we have made a detailed analysis of possible forms of price formation primarily as applied to this sector (one of such versions is presented in appendix 1—editor).

It should be stated with all frankness: An analysis has disclosed an incredible number of difficulties, which will have to be overcome. Noncorrespondence of prices of consumer goods in almost all their types and groups, which leads to the reproduction of existing and formation of new disproportions in the national economy and stimulates the development of inefficient structures, is the main difficulty. I will cite the following example: In

1913 the price of 1 kg of beef (in live weight) was equated with the price of 3.5 kg of wheat. Naturally, peasants were interested in grain production. This, in turn, created a firm basis for the development of the feed base of animal husbandry. Our country fully provided itself with grain and was one of its main exporters. Subsequently, however, the situation began to change. The process of grain depreciation began. In 1964 the price of 1 kg of beef was equated with the price of 11 kg of wheat. Subsequently, the differences increased even more (see appendix 2—editor).

Under the formed conditions agriculture ceased to be interested in grain production. The country was forced to import it. An attempt was made to solve the problem by administrative methods—by imposing grain production on kolkhozes and sovkhozes by coercion. As is well known, however, it was impossible to change the situation. Moreover, its shortage also began to hamper animal husbandry, because the feed base became weak.

The noncorrespondence existing between prices of agricultural products and industrial consumer goods is even more striking. For example, in 1975, in order to buy women's boots, a peasant sold an average of 800 to 1,000 kg of grain to the state. Today he needs to sell 1 to 1.5 tons for this (see appendix 3—editor). And even this, provided he is able to buy boots at state prices...

It seems that the cited examples convincingly show that an improvement in our economy and a transition to the market are inconceivable without a fundamental revision of the entire structure of retail, purchase, and wholesale prices and without the introduction of new principles of their formation.

**A question from the floor:** Has foreign experience in this area been studied?

**V. Shprygin:** Of course, it has been studied and very carefully at that.

**From the floor:** Does world experience indicate that a transition to market prices leads to their sharp rise?

**V. Shprygin:** Such an alternative is not ruled out. Everything depends on the interaction of prices with the economic mechanism—to what extent it is capable of canceling an unsubstantiated rise in prices through the tax system, as well as through the system of incentives for the attainment of high final results. For example, in China prices of fish—one of the food staples—initially jumped approximately 3- to 3.5-fold. Owing to this, interest in expanding its production arose. As a result, the population's needs for this product were met almost fully and its prices dropped to the initial level.

**R. Belousov, doctor of economic sciences, head of a department at the Academy of Social Sciences under the CPSU Central Committee:** When discussing price formation problems, we should fully realize that a transition to the market is inevitable. However, to a market, which has all its characteristic features: a free choice of the

seller and the buyer and contractual prices. We will have to answer two questions: How to do this and when to do this?

Obviously, the answer to the second question depends on the answer to the first. But here, in turn, tough restrictions exist. We should avoid a further fast inflationary spiral and a decline in the living standard of a significant part of the population. Let us recall Yugoslavia. What a fuss was made there when prices rose 10 percent! Later their rise continued uncontrollably—20, 30, and 100 percent... The decline in the population's standard of living was estimated at 40 to 50 percent. The same happened in Hungary.

I am convinced: For us such a way is unacceptable. We must act differently and, first of all, carry out monetary reform. After all, money is the nucleus of the market! If we begin the transition to the market from monetary reform, only the rich will suffer. However, price restructuring is a long and agonizing process, which will strike the poor a painful blow. I am by no means confident that the state will be able to act as the buyer and the seller on the market. To set firm prices? Then again prepare subsidies (see appendix 4—editor). I repeat, in my opinion, first monetary reform is needed. Then it is really possible to speak about a transition to the market and to commodity-money relationships; to the market, where there are cooperative firms competing among each other and, perhaps, even private ones.

**How to regulate prices here?** The following is one of the alternatives: After monetary reform it is possible to introduce coupons and coupon money for necessities. All the remaining products would be sold on a commission basis...

**G. Chubakov, doctor of economic sciences, professor at the All-Union Correspondence Financial Institute:** Are we for or against the market? Everyone is seemingly "for"—in words; but in deeds, against. After all, in reality the process of market formation is already going on, although in an extremely deformed form. A diversity of types of property—this is the immediate prospect. The range of producers of goods is expanding. And price reform? Obviously, we are late with it. But without it the market will either not be able to operate at all, or will operate for the shady economy. This should be realized quite clearly, because the nutrient medium of the shady economy, the nutrient medium of all types of speculations is a gamble on the difference between administrative and real market prices. A government program for a transition to a new price formation system is needed. It should include not only the combination of firm, regulated, and free prices. First of all, it is called upon to regulate money circulation and to block the road to emission. Only when a firm monetary unit is received is it possible to create a market.

**Yu. Yakovets, doctor of economic sciences, head of a department at the Academy of the National Economy**

**under the USSR Council of Ministers:** During a transition to the market a confrontation between two tendencies—positive and negative—occurs. Positive tendencies: Forms of market relations are gradually introduced into our economy, the price becomes the decisive factor in reproduction, and methods of public regulation of price dynamics change. Negative tendencies: The formation of two parallel monetary systems—the ordinary ruble, which rapidly depreciates in all the spheres of its application, including in investments and credits, and the foreign currency ruble used on an increasingly wider scale; in addition, inflation and a collapse of the consumer market itself. With all the types of regional restrictions, "visiting cards," coupons, and sale of products and goods at enterprises what talk can there be about a market?

We are afraid of market prices owing to the rapid surge of inflation. However, is it really inevitable? Market saturation will stop its rise immediately. An example? By all means. Let us take flowers. Remember how difficult it was to buy a bouquet 10 years ago. And now? At every corner. And prices are stable. Consequently, market saturation is the main way of fighting inflation. However, this problem cannot be considered abstractly. A specific approach is needed to every commodity and to every type of product. The very concept of market should be differentiated and not reduced to goods and services alone. After all, there are also resource, labor, investment, financial, and other markets. We ought to analyze each of these spheres of market circulation, determining the possible degrees of freedom and state regulation in each of them, and then define our position on prices, preparing several reform alternatives and submitting them for a wide discussion. Only such a discussion can suggest the way making it possible to avoid big upheavals.

**M. Gelvanovskiy, candidate of economic sciences, head of a sector at the Institute of World Economics and International Relations of the USSR Academy of Sciences:** One of the speakers referred to world experience. Apparently, however, this experience taught us nothing. Hungary has been changing over to the market for many years, but so far has not accomplished this. But the population's standard of living has declined by 30 to 40 percent. Can we follow this path, plunging the country into chaos and poverty? Do we try to determine, even if roughly, the price that will have to be paid for price reform? Apparently not, because we have not yet fully learned lessons from the period of perestroika. How many mistakes have been made during this time! For example, let us recall the notorious antialcohol campaign undertaken contrary to common sense and all economic laws. As a result, 40 billion rubles were withdrawn from the state budget. And what about cooperative activity, owing to which money not in cash is easily transformed into money in cash? And what about the "freedom" of forming income not corresponding to final labor results?

The population's guarded attitude toward the coming price reform is understandable. Who can give a guarantee that this time we will also not make big miscalculations? This is a very serious matter. Every step must be thought out here. It seems to me that the initial position was chosen correctly: In no way should we "release" key prices and let them move.

**A. Zhuravlev, doctor of economic sciences, USSR people's deputy, chairman of the Subcommission on Price Problems of the USSR Supreme Soviet:** How many economic departments—such as the State Committee for Labor and Social Problems, the State Committee on Prices, and so forth—regulate our economy! Are such departments needed? Of course, they are. A sick economy needs them. In our country it has been sick for a long time. However, we have managed to "cure" it even where it was healthy. And, first of all, with our price policy. It would seem that it has long been clear to all serious people: Prices should not be set, they should only be changed. That is, we should study the signal that the economy gives us and, depending on such a signal, regulate it.

Thus, what should the first step be? You remember the doctor's first commandment: "Do not do harm." This should also be the manager's first commandment. Such a commandment should be remembered, because our economy can no longer be made healthier with therapy—the time for a surgical intervention has come. And we must give proper thought to how to prepare the patient for the operation so that he does not "turn up his toes" on the operating table.

There are two poles on the consumer market: goods and money. There are not many goods. There is much money. We are trying to stabilize the market by saturating it with goods. However, it is impossible to fill a bottomless barrel! We must begin with money. That is, we must temporarily freeze all savings lying in savings banks. At the same time, we must issue new bank notes and introduce a parallel ruble rate: Let people live only on what they will earn from now on.

**Question from the floor:** And if savings are not in the bank, but in hand?

**A. Zhuravlev:** One must act honestly. If you have old assignats in hand, turn them over to the savings bank and let them lie there for the time being. When supply balances demand, it will be possible to gradually open the money sluices in savings banks.

With regard to retail prices, they should not be touched as long as money circulation is not stabilized. Lines and the shortage must be first eliminated. Otherwise, instead of "shock therapy" we will get "shock surgery" and nothing will save our patient any longer.

I am against a referendum on price reform. Every reform should have its authors. For example, there was Stolypin's reform—this is how it is called to this day. And now? It is not known who is preparing solutions. There should be a group of people, who will undertake

the responsibility for a professional solution and will carry matters through, being fully responsible for them.

**A. Komin, doctor of economic sciences, first deputy chairman of the USSR State Committee on Prices:** We have discussed one of the most important problems concerning the transition to a market economy—fundamental reform of the price and rate system in the country. Not very long ago the need for such reform evoked heated arguments. It had many advocates and opponents. Persistent demands to postpone it until better times were heard. Today, however, everyone understands that "better times" have already arrived and that without reform of the price and price formation system we will not change over to the market, to the functioning of commodity-money relationships on a scientifically objective basis, and to an efficient introduction of economic methods of management and regulation of processes, which occur in the economy. The debates are only about how to find more efficient ways, which would be painless for the economy and the country's population, in the implementation of this reform.

A whole gamut of opinions held by the economists—scientists and practical workers—who spoke has been presented today. They range from proposals on an immediate transition to free market price formation to the implementation of price reform in a rigid and centralized regime. What can be said in connection with this?

Some speakers again stated the need for monetary reform. In our opinion, however, such a measure will give nothing. Without a change in the price structure "surplus" money will again splash out on the market. It will splash out very rapidly. We should proceed from the latter, but, at the same time, see all the difficulties, which we will encounter.

The difficulties in the implementation of price reform are due to the fact that with any method of its implementation a significant rise in all prices and rates in the country—beginning from wholesale and purchase prices and ending with retail prices—is necessary. This need follows from the entire historical legacy, which our economy has absorbed in the last 4 decades, including in price formation. During the indicated period a tremendous price deformation accumulated gradually, being artificially restrained by administrative methods. Now this deformation has reached such proportions that old methods are no longer fit to control them. Therefore, the question is as follows: Either we will make the transition to a new price system and to a new price level in an organized manner, or such a level will be established spontaneously by the market itself.

Our committee is convinced: Price reform and a transition to the new system should be carried out in an organized and centralized manner through the introduction of a system of new list wholesale, purchase, and retail prices into the national economy. Measures to compensate the population for the rise in retail prices

should also be carried out in an organized manner. In particular, the amounts of pensions, allowances, and—for some categories of workers—wage rates and salaries should be increased. Then at the present stage the state will be able to control the processes of formation of the new price system, as well as inflationary processes.

The other way—free market price formation—is fraught with a loss of control over processes occurring in the economy and, in particular, inflation. These processes can obstruct the possibilities of the state to control them and can hit primarily the standard of living of low-paid strata of the population. They can lead to an even greater social and political tension in society and damage, instead of benefiting, economic perestroika at the first stage.

All the possible price formation methods, which are most suitable and efficient and are connected with the transfer of the economy to market principles, should be additionally studied with an examination of multi-variant approaches. Only one thing is clear: The solution of problems connected with price reform can no longer be postponed further. Whereas 2 years ago we could carry it out with much smaller costs, at present it is much more difficult to do this. To postpone the reform another 2 or 3 years means to increase the arising difficulties tenfold...

\* \* \*

As we see, the first deputy chairman of the USSR State Committee on Prices has already summed up the debate. Nevertheless, I would like to say a few words in this connection.

First, the discussion has shown how large the divergence of opinions is even among professionals. After all, directly opposite views were expressed at times! In fact, no one disputed the need for the price reform itself. However, preliminary conditions (monetary reform, freezing of deposits, and so forth), which voluntarily or not would hurt the interests of a certain part of the population even more and evoke its dissatisfaction, were laid down.

Second, no specialist stated clearly how the social protection of people, in particular badly-off people, was to be ensured during the transition to the new price structure. Let us recall the debate on this topic, which was held 3 years ago. At that time the initial postulate sounded as follows: Price reform should be carried out in such a way that the population's standard of living does not decline. However, elementary calculations have shown: In no way is it possible to fulfill this demand! All the plans proposed at that time evoked a stormy protest on the part of both scientists and the public...

Now we evaluate the situation more realistically and talk about it more honestly. Yes, we reject not only "shock surgery," but also "shock therapy." Nevertheless, it is clear: We will have to pay dearly for price reform.

However, who precisely will pay and how much? Badly-off people will receive some compensation. Consequently, the main burden of reform will lie on people with high and average income. It is assumed that they also can compensate for losses—theirelves, through more efficient labor. In fact, there are possibilities for this. The diversity of forms of property gives scope for enterprise and initiative. However, for all? For example, what is to be done with workers of the state sector of the economy, who produce products according to a state order, which are paid for at state rates? To go to cooperatives? Will the new price structure not lead to a complete collapse of state enterprises? It seems that we should also receive weighed and honest answers to these questions.

Of course, only professionals can offer a solution—better not one, but several alternative solutions! Nevertheless, we cannot do without their nationwide discussion. The people have the right not only to know all the truth about what awaits them, but also to express their attitude toward this truth.

#### **Appendix 1. Structure of Formation of Prices of Agricultural Products (one of the version proposed by the Scientific Research Institute of Prices)**

1. Firm state retail prices: This [group] includes flour, hulled and rolled products, macaroni products, bread and baked goods (with the exception of some fancy goods, which can be grouped with delicacies), zwieback, mixed feed, matches, tea (with the exception of imported tea), salt, sugar, vegetable oil and butter (with the exception of cedar oil), margarine products, and domestic perfumery products; domestically produced soap powders, toilet and household soap, tooth paste, tooth powder, children's cosmetics, and baby food products; meat (beef, mutton, and pork), poultry meat, edible animal fat, lard, canned meat (except for ham from lamb, veal, pork, and rabbit meat), grade I and II meat offals (except for tongue and liver), cooked, semismoked, and offal sausages, frankfurters, small sausages, semifinished meat and delicatessen products, meat dumplings, frozen meatballs, quick-frozen meat dishes, milk and dairy products (including cheeses and canned milk), fish and fish products (with the exception of delicacies), and mineral water.

2. Firm state purchase prices: This group should include products, which are raw materials for the production of products of group I, among them grain crops, sunflower seeds, fodder beans, peas, sugar beets, cotton, cattle, hogs, sheep, goats, wool, fiber flax (except for short fiber), hides and pelts, karakul-astrakhan lambskins, rabbit skins, tea leaves, chicken eggs, and milk.

3. State regulated retail prices: This group should include the goods enumerated in point 1, which are purchased by the state abroad. Depending on market conditions prices can change in one direction or another (let us assume, once in a quarter). The following domestically produced

goods should also be included here: coffee, beer, nonalcoholic beverages, food concentrates, sausage products (smoked and smoked-cooked sausage products pertaining to the group of delicacies), and confectionery products.

4. State regulated purchase prices: This [group] includes products forming the raw materials for the production of products of group 3, as well as medicinal products.

5. Contractual retail prices: smoked foods (with the exception of bacon and brisket) from beef, mutton, pork, and poultry meat, tongue, (beef, pork, and lamb) liver, canned ham, fish delicacies—sturgeon, salmon, whitefish, and products from them—caviar, crabs, fancy baked goods (with the exception of goods forming part of

group 1), bagel products, nonalcoholic beverages, and food concentrates (except for baby food).

6. Contractual purchase prices: This [group] includes products, which are raw materials for the production of products of the previous price group.

7. Free prices: These are products not included in the groups enumerated above.

When this scheme is taken as the basis for the formation of retail prices, contractual prices can make up approximately 30 to 35 percent in the retail trade turnover structure and free prices, 5 to 10 percent. As market relations develop, an increase in the share of contractual and free prices should be expected.

**Appendix 2. Ratio of Prices of Agricultural Products (Calculations by the Scientific Research Institute of Prices) (1913-1982)**

Name of product	1913	1926	1929	1940	1952	1957	1964	1970	1975	1980	1982
in relation to 1913											
Wheat	1.0	1.24	1.64	2.32	1.94	11.70	1.42	2.0	2.28	2.18	2.56
Sunflower seeds	1.18	1.1	1.04	0.8	1.98	3.11	2.37	1.93	1.75	1.72	1.65
Sugar beets	0.16	0.16	0.12	0.33	1.08	0.44	0.41	0.29	0.3	0.32	0.3
Raw cotton	4.58	4.55	3.45	12.42	32.87	6.25	5.3	5.55	5.11	5.77	5.30
Cattle	3.48	3.95	2.93	4.79	5.15	5.16	11.06	15.04	14.32	15.19	13.30
Potatoes	0.34	0.42	0.44	0.40	0.55	0.78	1.04	0.8	0.8	1.23	1.25
Hogs	4.4	6.65	5.0	7.07	7.22	13.78	14.5	16.08	13.68	14.38	13.19
Milk	1.0	0.9	0.85	1.46	2.89	1.74	1.76	1.95	1.91	2.54	2.34

The upper line of the table shows how the cost of wheat itself was changed as compared with 1913. When it was compared with other products, each time the cost of wheat was taken as a unit.

**Appendix 3. Equivalents of Prices of Agricultural Products and Industrial Consumer Goods (Calculations by the Scientific Research Institute of Prices)**

Consumer goods	Grain, tons		Milk, tons		Beef (live weight), tons		Hogs (live weight), tons	
	1975	1988	1975	1988	1975	1988	1975	1988
Women's boots	0.7-1.0	1.0-1.5	0.2-0.4	0.3-0.5	0.04	0.05	0.04	0.06
Women's shoes	0.35-0.5	0.5-0.7	0.15	0.2	0.02	0.025	0.03	0.04
Women's coats	1.2-1.4	2.0-2.3	0.5	0.5-0.6	0.6	0.1	0.08	0.13
Men's coats	1.5-2.0	1.5-2.0	0.4	0.4-0.5	0.08	0.08	0.1	0.1
Men's suits	1.0-0.5	1.0-1.6	0.25	0.3	0.05	0.05	0.09	0.09
Men's shoes	0.3	0.4	0.07	0.1	0.015	0.02	0.02	0.03

**Appendix 4. Subsidies and Additional Payments for Compensation for Losses Due to Realization of Products and Services (1988)**

Total	104.4 billion rubles
including:	
Food	90 billion rubles
Nonfoodstuffs and services	14.4 billion rubles
including:	
—of children's assortment	3.4 billion rubles
—Housing and municipal facilities	3.7 billion rubles

**REGIONAL DEVELOPMENT****Economic, Political Dissatisfaction in Urals Described**

904A0325A Moscow RABOCHAYA TRIBUNA in Russian 24 Apr 90 p 1

[Article by V. Mosunov, "950" press operator, secretary of the party committee of the rail and tie shop of the Nizhniy Tagil metallurgical complex: "The Urals: Desire for Change. Perestroyka's Success Depends on Each and Every One of Us"]

*[Text] Every day, life throws new challenges at us. But the main question that bothers me is why the five years of perestroyka have not made us richer and why we have lost even our modest economic gains. Several days ago the oblast party conference was completed. It seems we discussed everything and mentioned many problems at it. But I still feel concern and fear for the fate of perestroyka and, ultimately, the people in our workers' region: metal workers, miners, machine builders, lumberjacks and workers from other industries.*

Sverdlovsk Oblast has an enormous potential, both industrial and scientific. We have enterprises belonging to over 300 union and republic agencies. It is a full range of industries. The paradox is that we have everything except the most important thing, prosperity.

Judging by the speeches of the delegates to the conference—I was among them—our work has not deteriorated and our contribution to the state economy is still sizeable. Although last year, our Nizhniy Tagil metallurgical complex had to borrow money from the nation, it happened not because we have grown lazy or no longer work well. No, the ministry was siphoning short-term profits from the collective without concern for the future.

I will be honest, oblast labor collectives have tried to learn new forms of economic management. As noted at the conference, in the past years the financial condition of enterprises has improved, they began to show profit and the number of loss-making enterprises decreased. Especially pleasing was the fact that the growth rate in consumer goods production exceeded the plan. But this

gives little reason to rejoice: our store shelves are still bare. Where are our quality vacuum cleaners, washing machines, furniture, fabrics and knitwear? The center takes the lion's share of everything.

To say that we, Urals residents, are hurt is an understatement. The essentially colonial policy of ministries and agencies toward the Urals hurts us not only economically but morally, too. Speculation thrives and the faith of the people in social justice is being undermined.

We are tired of empty talk of independence for labor collectives: agencies do not want us to become masters in our own home. And yet, it is economic freedom that we need to be able to solve problems of our living conditions. Enterprises are still in the administrative vice of the agencies. Collectives lack elementary rights. Judge for yourselves: 20 million cubic meters of lumber is harvested in the Central Urals, but the oblast cannot find lumber to build housing and other facilities. We produce millions of tons of metal and pipe, cement and brick and easily overfulfill the plan for linoleum, ceramic tiles and other construction materials. Yet, the "Housing" program is lagging behind due to shortages of just such materials.

This year, the USSR Gosplan and Gossnab budgeted R200 million in funds and resources for the "Sreduralstroy" complex. What does this number mean? The oblast has met its obligations to clients, but we are being painted into a corner. Last year, Central Urals enterprises surpassed the profits target by R360 million. Yet, we live like paupers.

Social injustice on the part of ministerial princelings leads to an unstable situation and creates discontent among the people. In the final analysis, it also undermines the authority of the party. This is why hotheads blame us for all the problems. Of course, there is no smoke without fire. But the situation worsened because of many factors, including slow perestroyka processes in the party and in our oblast organization. But what makes people dejected most? The worsening of the situation in the socio-economic sphere. Not only the construction program for housing and medical facilities is failing, but the one for schools is, as well. We have long become accustomed and reconciled to getting 800 grams of rationed sausage and a bar of soap per person per month. People have no certainty that order will return soon and the situation will stabilize.

I repeat, the crisis has many causes. But I am most concerned with the situation in the party. For instance, there was a clear split at the oblast party conference. Democratic Platform supporters were eager to blame all our woes on the party and its leadership, both locally and at the center. I agree, there have been miscalculations—major ones, too. The blindness and passivity of some party apparatchiks doubtless undermined the authority of the party. But is the entire CPSU to blame? Last year in Sverdlovsk Oblast some 400,000 members left it. But none of the former communists named the primary

organization as the cause of the decline in authority. Let me cite what in my view is a typical example. Brylyakov, a metal heater at our complex, wrote in his request to leave the party that he had been firmly convinced that our vanguard was doing everything to help the people live better. But time was passing, he worked hard and took part in the work of the party organization, yet, there was no change. Brylyakov's father had joined the party at the front, in 1941. Now he has a pension of R68.50 a month. Recently, it was raised by a ruble and a half. It is not hard to understand the father and the son who were shortchanged by life in every respect.

Most workers leaving the party do it easily and painlessly. Some people try to portray it as a process of self-purification. I do not agree. When the party is being abandoned by representatives of the class it is supposed to serve, whose interests it is meant to protect, it is different. I think that we must stop this extremely troubling and even fatal process. Naturally, the party must free itself of those who, by their deeds, have caused moral or material damage to society.

We are surprised and outraged by the timidity of oblast leaders of every rank, both party and soviet, who are unable to protect the interests of the oblast population against central authorities. It so happened historically that the Urals produce 86 percent of Group A output. Yet, in all developed countries, consumer goods production is dominant. We must think about the people, and not about furnaces, conveyer belts and bulldozers, behind which it is hard to notice the individual.

The soil is of poor quality in the northern part of the oblast. Nothing ever grew there except for rye and oats. Only 6 percent of the oblast workforce works on the countryside. This figure keeps shrinking. More than 100 villages and towns are threatened with total extinction. This population structure is not our fault: it was presumably good for the nation. Let the nation now repay its debt to us by restoring and rebuilding the countryside. Yet, former CPSU Central Committee secretary V. Nikonov and Ye. Ligachev, who is still at his post, were not embarrassed to call us freeloaders. They, great agricultural experts, have determined that we must be able to feed ourselves.

Such an assessment of our work and living conditions stirred great resentment among the population. The insult still rankles. If you do not want to give us anything, we will do without it. We are no poor relations. We have everything, from construction materials to furs and precious metals. Leave us part of what we produce to barter for an equivalent amount in food and consumer goods. Workers' Urals, the mainstay of the country, has earned its right to it long ago.

Yet, our oblast party organization and local soviets lack firmness and persistence in protecting the interests of the region's population against ministries and agencies. By the will of the center we, and the residents of other regions too, have become hostages of the administrative

command system. Rallies and strikes in Sverdlovsk, Nizhniy Tagil, Kamensk-Uralskiy and Severouralsk confirm this view. Thus far, they have been conducted in an orderly way.

The authority of the party is earned by communists, both rank-and-file and famous ones. It is lowered by all members, too. Last fall, our complex had a visit from S. Kolpakov, the minister of metallurgy. We had many questions for him and the labor collective sent a group of representatives to meet with him. It included 11 party members. Yet, S. Kolpakov, a member of the CPSU Central Committee, did not want to listen to us and refused to meet with the group.

If such is the basis for our dialogue with the leadership, the party and its leaders will not earn our respect. And perestroika will never move forward. We want to accelerate it. And we will not shun responsibility, unlike our minister.

### Self-Financing Model in Kuybyshev Oblast Discussed

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[Interview with Gennadiy Khodasevich, first deputy chairman of the oblispolkom and director of the Main Planning and Economic Administration, by A. Solarev: "The Samara Version: a Model of Self-Financing Is Being Developed in Kuybyshev Oblast"]

[Text]

[bold]At the beginning of the year, Kuybyshev Oblast went over to self-administration and self-financing. Many had their doubts, thinking that the already difficult social and economic situation might be worsened. We asked one of the initiators of the transition to self-financing, Gennadiy Khodasevich, first deputy chairman of the oblispolkom and director of the Main Planning and Economic Administration, to explain the new principles of regional management.

[Khodasevich] It is clear that such fears were not accidental. Ignorance about cost accounting compels the introduction of rationing for literally everything—from industrial output to food products. The almost universal bartering between regions, branches and enterprises that many find depressing has become the practice. But our model of management is aimed precisely against this, so that in the end it will be possible to find a way out of the crisis with the help of fairer economic decisions. The oblast has already gained experience in the development of progressive management methods. Everyone is familiar with the system for the administration of the Volga Motor Vehicle Plant. We were among the first in the country to establish a commercial center Kuybyshevglavsnab and the first joint-stock bank—AvtoVAZbank in Tolyatti. New forms of interbranch and territorial-branch interaction are being developed, for which inter-organizational associations have been established for

city and rayon ispolkoms. The oblast's public health has been transferred to cost accounting.

[Solarev] So there is a gradual renunciation of previous branch structures?

[Khodasevich] Yes, this process has begun. And it is necessary, for in essence the policies of the all-powerful central departments over many years dictated an extensive development of the oblast and megalomania in machine building, chemicals and petrochemicals as well as in the excessive and ecologically harmful increase in production capacities. And there was no concern about the social sphere and the preservation of the environment. This is also the reason for demographic distortions. Almost 75 percent of the entire population of the oblast is now concentrated in Kuybyshev and Tolyatti. There has been a sharp decline in the economic activity of small and medium-sized cities and in the contribution of agriculture. Who will then feed the oblast and satisfy it with goods in everyday demand? And what a demand there is! Just one giant such as the Volga Motor Vehicle Plant pays millions of rubles in wages every month. How can they be exchanged for goods? So the managers are left alone with their problems.... Heretofore they have not had the necessary conditions, rights, resources, personnel and incentives to solve them. How can there be any talk of comprehensiveness and an adequate level of social development when only 4 kopecks out of every ruble earned by the oblast go to the local budget?

The very logic of economic and political reforms put the question of the establishment of a new and fairer mechanism for management in the region on the agenda. As early as this year, the total size of the budget is supposed to be increased to 2.2 to 2.3 billion rubles. This is 1.5 to 1.6 billion more than last year's budget. And there is a financial base for this. It is the profit of the oblast enterprises, which amounted to about 3.5 billion rubles last year. This, by the way, is significantly more than in many other oblasts.

[Solarev] And will not the result be that in your search you will be copying the Baltic region? Are there differences here and precisely what are they?

[Khodasevich] Naturally we studied the Baltic models. And we derived much from them that is reasonable and useful. In a number of fundamental positions, however, we cannot agree with them at all. Above all we are not pleased with the legislative assignment of the exclusive ownership of the regions or with the system of interrelationships with the union budget. Here we have made no provision to transfer to the oblast soviet the management of enterprises located in the territory of the oblast. There is no need to destroy the union and republic subordination, because they have national and republic significance. And this is the only possible attitude if the refining of oil and large metallurgical and power capacities are needed by all. The production of consumer goods, agricultural and construction complexes, the services sphere, nature conservation and everything that is

directly related to the establishment of the normal living conditions of the population are all within the power of the local soviets.

In contrast to the Baltic states, therefore, we considered it necessary for only two spheres of the union and republic economy to be transferred to the competence of the oblast. Here, by the way, it is important to have ties with local resources and the speed of the reaction to "their own" needs means a lot. But the interrelationships of local soviets with union enterprises or associations will be organized on the basis of the principles of reciprocity, mutual advantage and strict observance of contractual obligations. In such a version, there is no danger of complications in connection with the abrupt breakdown of the existing system of production ties. As for the collection of taxes for the local budgets from organizations serving the territories of several oblasts (railroads, river navigation companies and so on), it appears that it is expedient to levy them proportionately to the income obtained in "our" territories.

[Solarev] But until the new mechanism begins to work at full strength, will we not see what was predicted by Lithuanian economists and managers, who say that after the transition to cost accounting the standard of level will at first decline further? Should we also be propagandizing the slogan of "tighten your belts"?

[Khodasevich] I do not know what was the basis for the conclusions of the Lithuanian economists. Our calculations show that precisely the introduction of cost accounting in the oblast (and not its delay) will lead to an improvement of the population's standard of living. The new mechanism establishes all the preconditions for this. And above all the guarantee for this is in the strengthening of the social orientation of the development of the economy and in the consideration of the interests of individual social and demographic groups as well as of the entire population of the oblast. But the main thing is that the level of competence of the soviets is being made to correspond to legal provisions and resources. And then money will be neither "excessive" nor "empty." And then we will not have to hear that we are in 62nd place in the RSFSR in the provision of the population with hospital beds, in 61st place in the establishment of children's preschool institutions and in 70th place in the number of places in club organizations. All of the incentives for the elimination of such lags are in our hands. Just work.

[Solarev] This is all good but are you not going to another extreme and will it not happen that after the transition to cost accounting "Moscow's authority" will gradually be replaced by "Kuybyshev's authority"?

[Khodasevich] You are mistaken. The authority of union and republic ministries based on directive methods of administration can by no means be replaced by local authority. And this is impossible by virtue of the fundamental change in the nature of the interrelationships of cost accounting enterprises and the cost accounting

oblast. All of the interrelationships are now becoming economic. And therefore the administrative-command dictate is unacceptable per se. Now any enterprise is on equal terms with us. It enters into contractual relations, makes the corresponding tax and other payments only to the city or rayon soviet in whose territory it is located. In accumulating this income, each city and rayon soviet transfers part of its total income under a set standard. Through these means and other income, the oblast soviet finances overall oblast expenditures and, also in accordance with standards, pays the republic and union.

[Solarev] But did all the cities and rural rayons have the chance to switch to the principles of self-financing?

[Khodasevich] Unfortunately, not all of them. This is difficult for small cities and a number of rural rayons to do. But it is necessary to strive for this and we are starting to carry out an intraoblast policy of economic protectionism. But differential payment for regional resources is becoming a most important tool here. Taxes will stimulate rather than choke initiative. For this reason, we will carry out programs for the development of the corresponding cities, rayons, zones and rural inhabited localities under such favorable conditions and grant the population preferential loans for individual housing and garden-cottage construction and the acquisition of durable goods. When necessary, we suggest and issue grants for the expansion of production and services. For the financing of such an intraoblast policy of economic protectionism, a money fund is formed outside the budget and other special funds are established.

[Solarev] So such action required changes in the function of the oblispolkom Main Planning and Economic Administration that you are in charge of?

[Khodasevich] I would say that fundamentally new functions are appearing in commercial activity, marketing, management, foreign economic ties and the substantiation of economic instruments (regional orders, local tax policy, payment for resources, etc.). The establishment of joint enterprises and the development of entrepreneurship helps to accelerate the assimilation of new forms of management. For this reason, the oblispolkom recently adopted a document on the establishment of an "Intervalga" association for practical cooperation that will include large Western firms. Needed are new personnel, new administrative structures and a reliable scientific support of planning and other administrative decisions. In short, it is necessary to do everything so that the oblast can live on its earned profit.

## MODELING, ECONOMETRICS, COMPUTERIZATION

### Goskomstat Chairman on New Focus of Statistical Work

904A0261A Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)* in Russian No 2, Feb 90 pp 33-44

[Interview with V. N. Kirichenko, USSR Goskomstat Chairman, by correspondent of *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)*: "Cleaning of Statistics"; place, date, and occasion not given]

[Text]

[Correspondent] Vadim Nikitovich, are there some improvements in statistics? And how do you see its tasks?

[Kirichenko] For a long time statistics was the "servant" of directive planning, which determined both the order for a range of indicators and methodology. It was placed under such conditions that it could talk openly only about achievements, confirming them with an abundance of "percent of plan fulfillment" and with rates of growth, not with absolute data. The methodology of constructing these data did not make it possible to compare them with the indicators of other countries. The orientation toward a show of achievements and advantages gave rise to deformations in methodology, which served these aspirations. All this gave rise to distrust of official data both in our country and abroad.

However, statistics gave vast and sufficiently complete statistical information to leading political and economic bodies of the country, Union republics, krays, and oblasts, not keeping silent about disruptions, shortcomings, and oversights in the functioning of the economy, its individual sectors, territories, and enterprises. This was done for a narrow circle—for official use. The restructuring in society, reevaluation of views of the past, and active search for a way out of crisis situations aggravated the problem of reliability and authenticity of statistical information.

Marked changes in the business of statistics in the country began after the June (1987) Plenum of the CPSU Central Committee. Statistical bodies have received a new structure. Purely statistical services have merged with the computer system. All organizations on oblast and rayon levels have been transferred to full cost accounting and given the rights of state enterprises. Their economic connection with goskomstats [state committees for statistics] of the USSR and Union republics is carried out through a state order for statistical work.

Materials on the country's economic and social development have begun to be prepared more efficiently. The time of receiving and working out reports has been shortened sharply. Leading, economic, and managerial bodies on all levels receive current information during the first week after the period under review.

Economic surveys of the country's situation and of the economic and social development of Union republics are being prepared in the center and in localities jointly with other economic bodies. The range of subjects and problems covered by statistics, especially in the social area, is expanding.

All existing sectoral and intersectoral reporting is being revised and regulated. Intersectoral reporting for 1989 has been revised and simplified somewhat. The volume of statistical information worked out by kolkhozes and sovkhozes and by interfarm and other agricultural organizations has been reduced in half. In accordance with the decision of the USSR Goskomstat the validity of sectoral statistical reporting forms has been suspended as of 1 January 1989. Ministries and departments have been instructed to form it anew. Goskomstat has brought the instructions on the preparation of reports into line with the requirements of the laws on the state enterprise and on cooperatives. However, there are still many normative acts on statistics, which require simplification, and statistical bodies are working on this.

Information publishing centers have begun to function under the USSR Goskomstat and goskomstats of Union republics. The information publishing center of the USSR Goskomstat issues press releases with current statistical data for mass information media almost daily. Press bulletins, individual statistical studies, one-time recording and survey data, and other current information have been published since 1988. The publication of statistical collections on the national economy as a whole and on its individual sectors has expanded considerably. Archives of statistical bodies have been opened to scientific research institutions and higher educational establishments.

[Correspondent] Everything that you have mentioned is important, but are these measures sufficient for a radical restructuring of statistics?

[Kirichenko] Of course, these are only the first steps.

[Correspondent] And what are the basic tasks of statistics at the present stage?

[Kirichenko] I would call the authenticity and reliability of statistical data and, thereby, restoration of trust in them, the first goal.

A revision of existing methodologies and methods in order to clean them of all kinds of embellishing techniques has begun. We are working on raising the scientific level of methodology and contingency among various sections of statistics, as well as with international standards.

For a revision of existing methods the USSR Goskomstat has established a group, which includes leading specialists of the Goskomstat, the Gosplan, the Ministry of Finance, and the USSR State Committee on Prices, as well as economic scientists. Working groups according to branches of statistics have been formed.

About 50 methodological studies according to various directions in statistics are envisaged for 1989-1990. They include the following:

- calculation of indicators concerning the dynamics of inflation and the purchasing power of the ruble;
- calculation of the cost of living index of the population with different income levels;
- computation of the gross national product, using the structural grouping of the international standard system of national accounts;
- preparation of basic consolidated accounts of the national economy in accordance with the principles of the international system of national accounts;
- computations of the rates of growth of national income and the gross national product on the basis of deflator indices of representative goods;
- determination of the population's excess savings (unmet demand);
- drawing up of the report balance of financial resources for the USSR and the territory of a Union republic;
- a system of statistical indicators characterizing the consumer properties of consumer goods and determination of the economic content and composition of the retail trade turnover and paid services (elimination of double counting).

As you see, there is a great deal of responsible work. We expect that, having carried it out, we will enter into the system of calculations of indicators used by the whole world.

Something has already been done to revise the data that have already been published. You have probably noted that the latest publications of the dynamics of national income and other general economic indicators are free of the effect of the methodological distortions adopted for the elimination of the reduction in alcohol production and consumption after 1985. They disclose the growth of the state budget deficit, which the broad public did not even suspect before 1988. The size of the state debt and indices of average prices of consumer goods purchases have begun to be published and data on the ecological situation have been expanded. Calculations of the consumption of meat without fat and offals have been presented (correction for 8 kg in relation to previous data). In the evaluation of the grain crop we change over from hopper weight to the weight of grain after its processing, that is, according to standard moisture and weediness (correction for 13 to 15 million tons).

Strengthening the analytic function of statistics is the second goal. Not recording and obtaining figures in themselves, but an analytic conclusion from them, is the financial result of statistical work. We set for ourselves the task of realizing this requirement in the very near future, also ensuring the forecast direction of the analysis.

[Correspondent] Apparently, there is also particular research activity here?

[Kirichenko] Science must be enlisted widely. Statistics has many problems, which do not have a reliable scientific solution; for example, the calculation of economic growth with due regard for qualitative structural shifts, appearance of fundamentally new types of products and services, and rise in the role of intellectual forms of activity; or the theory, indicators, and specific features of inflationary processes, calculations of the purchasing power of the ruble, ensuring the unity of evaluations of financial-cost and material-physical aspects of reproduction, and attaining generalizing indicators of the effect of scientific and technical progress on production efficiency and, moreover, indicators of production intensification themselves; or substantiating the system of social indicators of the country's development—this is also the unplowed virgin land of science.

Expanding glasnost in statistical information is the third goal. I think that scientific circles and the wide public have noticed the expanded range of publications and the diversity of forms and stability of their issue. We will follow this path energetically. The zone of secrecy in economic statistics is decreasing.

[Correspondent] However, it is not always known how a specific figure is obtained.

[Kirichenko] The openness of statistics also implies the openness of methods. Not only statistical bodies, but also other organizations, as well as individual scientists, will be able to perform alternative calculations of indicators; of course, with the observance of the following main conditions: ensuring the unity of the initial statistical base, openness and concreteness of the methodology of alternative calculations, and, finally, competence of developers of alternative evaluations.

The mastering and introduction of the latest information technology and modern computer equipment are urgent tasks.

Thus, the efforts of Soviet statisticians are directed toward improving the methodology of formation and increasing the authenticity of information and its greater openness.

[Correspondent] Is it possible to single out some priority directions in statistical work?

[Kirichenko] The calculation of price indices represents the leading link of the entire chain of problems concerning authenticity and intensification of the analysis of

economic and social processes and the point of attraction of heightened public attention. As yet there is not much experience here, even if because the price rise itself has been denied for a long time.

Until recently state statistics has calculated the so-called retail list price index. This did not show the change in prices in the national economy in connection with the appearance of new or somewhat changed goods, services, machinery, and equipment and the increased share of the imported means of production and consumer goods. The introduction of the new economic mechanism and the transfer of enterprises to full cost accounting and self-financing have expanded the framework of contractual and other prices. Goods of cooperatives and of people engaged in individual labor activity have appeared.

A reliable calculation of price indices (wholesale and procurement prices, prices of construction and installation work, transport rates, retail prices and rates of paid services for the public, and so forth) makes it possible to reach realistic evaluations of the dynamics of key general economic indicators. The calculation of the price index is also of acute social significance: After all, on the basis of these data it will be possible to make decisions on corrections of wages, pensions, allowances, grants, and so forth.

[Correspondent] How specifically has the price following system now been organized?

[Kirichenko] For a real reflection of the dynamics of consumer goods prices the USSR Goskomstat regularly conducts observations of their level and dynamics for 650 representatives goods in a selective network of state trade stores in all oblast, kray, and republic centers (150 cities). For an analysis of the changes in prices of goods of cooperatives and of individual labor activity two or three cooperative enterprises or state stores, where these goods are sold, are selected in every oblast, kray, and republic center.

The observation of prices of foodstuffs reflects the changes in their movement, as well as in the proportion of products sold at higher prices through cooperative trade organizations and the kolkhoz market. During the first half of 1989 prices of foodstuffs in city cooperative trade organizations were 2-fold higher than in state trade and on the kolkhoz market, 2.6-fold, but their share in the total trade turnover comprised 5.1 and 4.7 percent respectively.

A generalizing price index for the entire commodity mass sold through state, cooperative, and kolkhoz trade will be constructed on the basis of indices of prices of representative foodstuffs and nonfoodstuffs.

The determination of price indices gives the key to an evaluation of the scale and dynamics of inflation. However, under our conditions, when the bulk of the prices are regulated directly, forced accumulations of monetary assets—owing to the deepening shortage of many

types of goods for the population and of products for production and technical purposes—represent an even more powerful factor in inflation. Therefore, we have begun to use two concepts: apparent (owing to prices) and "suppressed" (owing to shortages) inflation. According to preliminary evaluations, during the first half of 1989 the latter accounted for three-fourths of the increase in inflation.

[Correspondent] Generalized evaluations of inflation have not been published thus far...

[Kirichenko] In order to reach them, it is necessary to work thoroughly in the area of methods, statistical observations, and practical calculations. But as long as this did not exist, statistical bodies began to publish individual characteristics of inflationary processes—the share of the commodity turnover covered by a rise in average prices, dynamics of all monetary income and emission of money, and ratio of dynamics of the population's monetary income and expenditure on the purchase of goods and payment for services. In 1986-1988 the average annual growth of the population's income comprised 5.5 percent and of its expenditure on goods and services, 4.3 percent. In January-September 1989 the former increased by 12.2 percent and the latter, by 9.2 percent. In the growth of the commodity turnover the rise in retail prices accounts for more than one-fourth.

[Correspondent] Do other methods of calculating inflation not through producer goods exist?

[Kirichenko] The drafting of the minimum consumer budget is fundamentally important for an evaluation of the social situation in the country and the implementation of social programs. The population's distribution by income groups has been published for the first time. In 1988 a total of 36 million people (12.6 percent of the population) had an average per-capita income of 75 rubles per month. Large families make up one-half of the badly-off population, pensioners, one-fifth, and single mothers, the same. Now it is necessary to improve the system of indicators of the Soviet people's living standard and way of life, which reflect the true state of affairs.

The results of the all-Union population census will have to be completed and published in the very near future. This major statistical research will significantly deepen and refine our ideas of the country's life.

International economic comparisons should be included among very urgent priority studies. They should be placed on a new basis both methodologically and organizationally. The inclusion of the USSR Goskomstat in international economic comparisons conducted by UN bodies, as well as joint actions with statistical bodies of capital countries—the Federal Statistical Administration of the FRG and Austria's statistical service—has become such a basis.

[Correspondent] What prevents the appearance of comparison handbooks?

[Kirichenko] International comparisons are labor intensive. As the experience of UN organizations has shown, every stage in comparisons based on annual data takes about 5 years. However, we must embark on this, because participation in such research will enrich us methodologically and will enable us to gain international recognition for the results of comparisons of socioeconomic indicators. The problem of integrating the system of the national economic balance with the system of national accounts used abroad is being studied jointly with international organizations.

[Correspondent] Everyone is bored to death with the criticism of the notorious "gross output." It has been criticized almost from the moment of appearance, but it still exists. What is the reason for its vitality?

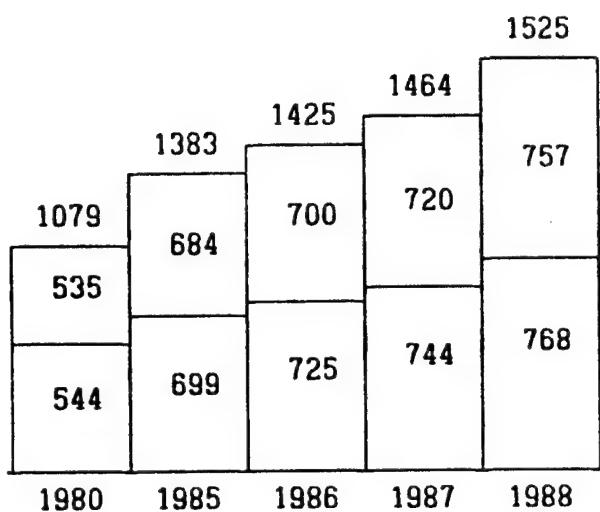
[Kirichenko] Some writers on economic topics have made the criticism of indicators of gross output almost a profession. A sober, truly professional approach makes it possible to draw the following conclusions: First, general economic indicators cannot be bad in themselves. Each of them covers a certain zone of the integral reproduction process. Methods of calculating them can be bad and ways of using them can be incorrect and contradicting the very nature of indicators. We already have sufficient experience in order to know firmly: Not a single general economic indicator in itself can "spoil" the economy or be a "magic wand." For a successful development of the economy it is necessary to improve or radically change the economic mechanism and not to hunt for a successful cost or physical indicator.

National income is the closest to a description of the net final result of activity of material production. The efficiency of public production should be calculated on its basis.

The material sources of subsequent reproduction created by current production describe the final national product more adequately than other indicators. It reflects the entire volume of resources for a given period, which society has at its disposal and can use for unproductive consumption, restoration of the consumed means of production, and accumulation.

The gross national product reflects the real flows of material wealth in value terms among various economic links. Therefore, it contains double counting. It is used in the national economic balance as calculated on the macrolevel during the determination of intersectorial ties and proportions, interregional ties, the ratio between subdivisions I and II, and so forth. Of course, it would be a mistake to use it for the determination of efficiency, or to pass it off as the indicator of final production results.

In contrast to all previous indicators the gross national product also includes the sphere of nonproduction services, that is, the results of all economic units of both productive and nonproductive spheres. Since recent times this indicator has been worked out by the USSR



Goskomstat in accordance with the methodological recommendations of UN statistical bodies. Direct comparisons of the level and rates of economic growth of the USSR and foreign countries are possible on its basis.

[Correspondent] The materials for state plans point out the need to improve the ratio between the final and the intermediary product. Previously, there was no such division in publications—it has been introduced only now. Or does only the Gosplan count this, but the Goskomstat does not?

[Kirichenko] The final product is part of the gross national product less the value of productive consumption of subjects of labor (the intermediary product). It characterizes the result of annual public production. According to the material and physical composition the final product consists of consumer goods and the means of production used for replacing the withdrawal of fixed productive capital and its major repairs and for production accumulation.

An accelerated growth of the final product as compared with the growth of the intermediary product, on the whole, would point to progressive changes in favor of final results and increase in production efficiency. Ratios between the final and the intermediary product (in actual prices, billion rubles) are presented in the diagram.

Before 1987 the growth of the final product lagged behind that of the intermediary one. The national economy was slowly reoriented toward final results. In 1985, as compared with 1980, 1 ruble of growth of the intermediary product accounted for 0.963 rubles of the growth of the final product and in 1986, only for 0.617. In 1987 a breakthrough occurred: The growth ratio was in favor of the final product—1:1.026—and in 1988—1:1.564.

Thus, marked positive shifts in the ratio between the growth of the final and the intermediary product

occurred only in 1988. The same ratios in comparable prices were as follows: 1986—1:0.803; 1987—1:0.807; 1988—1:1.649.

We calculate these data constantly and publish them in statistical collections on the national economic balance.

[Correspondent] It follows from Goskomstat reports that production volumes grow less than wages. From where are payments made? What is here—some clever counting mechanism, or something else?

[Kirichenko] There is no clever counting mechanism here. The ratio of these figures points to the most acutely destructive contradiction: The sharp weakening of directive constraints in wages, price formation, and distribution of enterprise income under shortage conditions led to a price pressure on profit and hence on income and wages inadequate to a real product growth and production efficiency.

Thus, in 9 months of 1989 the volumes of work of contract construction and installation organizations decreased by 1 percent and freight dispatch by railroad transport of the Ministry of Railways dropped by 1.6 percent. At the same time, labor productivity rose by 3 and 0.3 percent respectively. Average monthly wages per worker increased by 8.2 and 4.8 percent respectively.

[Correspondent] Goskomstat reports customarily noted that the population increased expenditures on the purchase of products. This is a very vague formulation. How does this increase occur—owing to a rise in prices or something else?

[Kirichenko] If you noted, in this case—according to the results of the first 6 months of 1989—the USSR Goskomstat got away, as you said, from “vague formulations.” In particular, in 9 months of last year the total volume of retail trade turnover increased by 26.7 billion rubles (9.9 percent) as compared with the corresponding period of last year. Of the total volume of increase in the trade turnover more than 20 percent (6 billion rubles) of the increase was obtained from a rise in average group retail prices: The sale of goods to organizations, institutions, and enterprises (small wholesale commodities) by written order and for ready cash increased by more than 3 billion rubles; alcoholic beverages account for 30 percent of the increase (8.1 billion rubles). In fact, the commodity mass sold to the population grew by approximately 9.5 billion rubles, or by 4.3 percent.

With regard to the increase in the population's expenditures on the purchase of food products, the products received by trade during 9 months decreased by 3.7 billion rubles as compared with the plan and, although there is a growth of 1 percent as compared with the corresponding period, it is insufficient, because it serves only the population growth, not improving the provision with products.

This was not long in affecting kolkhoz market prices, which in January-September, as compared with the same

period of last year, increased by 6 percent, including of meat and poultry, by 4 percent; of vegetables, by 9 percent; of fruits, by 3 percent; of potatoes, by 16 percent. The population's expenditures on the purchase of food products increased. According to the data of the survey of 90,000 family budgets, the expenditures of workers', employees', and kolkhoz members' families on their purchase increased by 3 to 5 percent as compared with January-September of last year.

[Correspondent] And the last question: The report by V. A. Kryuchkov, member of the Politburo of the CPSU Central Committee, at the grand meeting devoted to the 72th anniversary of October noted that "... the quality of statistics is improving and its data are being published widely." This is a very high appraisal, especially against the background of the criticism of statistics in scientific

circles. Apparently, statistics gives much vaster statistical material to leading bodies?

[Kirichenko] This is a really high appraisal and obligates us to a great deal. Nevertheless, I will stress: At the present stage in democratization and glasnost statistical bodies will constantly expand and improve their information for all levels of economic management, scientific circles, and the wide public. With regard to the question—to whom "more" and to whom "less" statistical information is presented—statistics is becoming open to science, as to the entire society, and I am confident that this openness will make it possible to objectively evaluate the state of our country's economy.

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## REGIONAL DEVELOPMENT

### KaSSR Deputy Chairman on Leasing, Peasant Farming

904B0172A Alma-Ata KAZAKHSTANSKAYA PRAVDA  
in Russian 23 Feb 90 p 3

[Report by Deputy E. Kh. Gukasov, first deputy chairman of the Kazakh SSR Council of Ministers: "On Kazakh SSR Draft Laws on Leasing and on Peasant Farming"]

[Text] Dear comrade deputies! The republic's government submits for your consideration Kazakh SSR draft laws on leasing for adoption at this session and on peasant farming for a fundamental approval and publication in the press for nationwide discussion.

Along with other legislative acts they are to ensure reform in the system of national economic management radical in its aims and scale and to establish a foundation for radical social and economic transformations.

Before reporting on the key provisions of the submitted documents, permit me to dwell in brief on the present state of affairs in the republic's economy. Despite certain difficulties and shortcomings, the processes of renewal penetrate ever more deeply into all the spheres of economic life. During the current five-year plan it has been possible to improve the social and economic situation as a whole to a certain degree and to attain shifts in priority areas of the national economy.

The tendency toward a drop in the rates of economic development has been stopped. During 4 years of the five-year plan the rates of average annual increase in the produced national income made up 2.1 percent, as compared with 0.7 during the corresponding period of the last five-year plan. During those years the productivity of social labor increased by 5.3 percent, whereas in 1981-1984 it declined by 2.8 percent.

From the beginning of the five-year plan 31.4 million square meters of housing were commissioned, or one-third more than during the same period of the last five-year plan. The population's provision with children's preschool institutions, hospital beds, and outpatient-polyclinic institutions increased.

During those years the output of goods for the people increased 1.5-fold and paid services, by more than two-thirds. Last year almost 60 percent of the retail commodity turnover was provided with its own resources, whereas at the beginning of the five-year plan this made up about 40 percent. Food resources increased.

However, the shortage of our economy is not being eliminated and the population's provision with goods remains complex. Consumer goods, both foodstuffs and nonfoodstuffs, are produced insufficiently. There is an outstripping growth of the population's income. In 1989

the population's monetary income increased by 10 percent, whereas the production of consumer goods rose only 7.7 percent and the realization of paid services, 8.8 percent. Last year the gap between the population's mass of money and mass of commodities amounted to about 3 billion rubles.

Ambiguous and at times contradictory processes of perestroika exist. On the one hand, positive tendencies toward renewal increasingly penetrate into the economy and, on the other, the rapid upsurge in public activity is often accompanied by an aggravation of social tension, labor conflicts, and manifestations of group egoism, which, of course, cannot fail to affect social and economic development.

In a number of sectors and areas last year a deterioration in the economic activity was allowed, a decline in the production rhythm occurred, labor discipline dropped, and, as a consequence, the previously attained dynamism began to be lost. The possibilities of increasing production efficiency are realized poorly. Perceptible changes in resource saving and in the reduction of material and other expenditures do not occur.

A large number of unprofitable enterprises and organizations remain in many economic sectors. Last year 7 percent of the industrial enterprises, 6 percent of the contract construction and installation organizations, and 14 percent of the sovkhozes and kolkhozes were such. A significant number of enterprises do not fulfill contractual obligations for deliveries of products. In the republic's national economy in 1989 work time losses increased by 16 percent, as compared with the previous year, exceeding 2.2 million man-days.

The unbalance of the consumer market and of money circulation intensifies. In this direction only yesterday the republic's government has adopted a package of special decrees, which determine measures of an emergency nature. They will require extensive organizational work, increase in the responsibility of enterprises for the fulfillment of state orders and observance of contractual discipline, strengthening of the dependence of wages on final results, and development of nontraditional, new channels of realization of the population's income.

Under conditions of the steady weakening of administrative methods of management economic levers and incentives become increasingly necessary. There is a need for economic relations, which stimulate collectives and every worker to efficiently accomplish the tasks set for them and to combine their group and private interests with statewide interests. The mastering of leasing in the national economy is one of the decisive ways of attaining such a goal.

The general provisions on leasing are determined in the Fundamentals of Legislation of the USSR and Union Republics adopted by the decree dated 23 November 1989 of the USSR Supreme Soviet.

In its essence leasing is a mechanism, by means of which a real possibility of raising production relations to a higher level is ensured. It represents possession—for a fixed period and with payment—and use on a contractual basis of land, other natural resources, enterprises, and property complexes, as well as other property necessary for an independent performance of economic activity.

Leasing can be applied with respect to the property of all forms and types of ownership. The contract is the basic document regulating relations between the lessor and the lessee. It is concluded on the basis of voluntary participation and full equality of the parties. It stipulates the composition and value of the leased property, the amount of payment, the term of leasing, and the distribution of parties' obligations. The products and income obtained as a result of the use of the leased property are the lessee's property. He can fully or partially buy out the leased property.

This is one of the reliable methods of management, which, on the one hand, is profitable for the state and, on the other, both for a good worker and a peasant and for a creatively thinking specialist and manager. The practical experience accumulated in the last 2 years attests to this.

The most active and systematic work on mastering collective, family, and individual forms of leasing relations is carried out in the system of the republic's agro-industrial complex. Approximately 25 percent of the farms have fully mastered such relations. The anti-expenditure mechanism and high efficiency are manifested here only in interrelations among leasing collectives and only with overall mastering by all farm subdivisions and services.

Labor collectives, which have become stronger owing to overall leasing, attain fairly high results. For example, the Kolkhoz imeni Krupskaya in Taldy-Kurgan Oblast, transferring all subdivisions to leasing as of January 1988, increased profit from 659,000 rubles in 1986 to 2.6 million rubles in 1989. During that period labor productivity rose 1.6-fold. On the Karauzyakskiy Sovkhoz in Kzyl-Orda Oblast, which mastered leasing and cooperative relations in 1989, while the number of workers decreased by 39, the production of agricultural products, as compared with 1988, increased by 45 percent, material expenditures per 100 rubles of gross output decreased from 79 to 61 rubles, and labor productivity increased by 41 percent, output-capital, by 125 rubles, totaling 630 per 1,000 rubles of fixed capital, and sovkhoz profitability, by 39 percent.

The following can also be included among farms, which have best mastered leasing: the Kaskelen Experimental Farm of the Kazakh Scientific Research Institute of Farming, the Sovkhoz imeni Suyunbay in Alma-Ata Oblast, the Ulanskiy Sovkhoz in East Kazakhstan Oblast, the Sovkhoz imeni 25-Letiya Osvoyeniya Tseliny in Kokchetav Oblast, the Sovkhoz imeni Dzerzhinskii in

Kustanay Oblast, the Sovkhoz imeni 25 Syezda KPSS in Semipalatinsk Oblast, the Pugachevskiy Sovkhoz in Ural Oblast, the Vozdvizhenskiy Sovkhoz in Tselinograd Oblast, and others.

Or let us take the construction complex. At present leasing collectives of the republic's Gosstroy perform one-third of the contract work. Last year labor productivity increased by 7.7 percent there. The level of construction profitability rose from 18.9 percent in 1988 to 21.6 percent, which was much higher than throughout the Gosstroy. The amount of profit rose 13 percent in 1 year and production unprofitableness was eliminated fully. Above all, under objective conditions equal with those of others these organizations successfully realize the start-up program. In the Chimkentzhilstroy Planning and Construction Association the volume of contract work was fulfilled 118 percent, 101,400 square meters of housing were commissioned with a plan of 87,900, labor productivity rose 18 percent, and the profit plan was exceeded by 31 percent.

Last year leasing relations also began to be widespread, although very timidly, in industry. A total of 39 enterprises work under leasing conditions in the republic as of 1 January 1990. Last year they increased the volume of output by 12.3 percent, contractual delivery obligations by 100 percent, and the state order for nonfoodstuffs, by 124 percent.

The experience of the Alma-Ata Bridge Structure Plant, where along with the leasing of the entire plant appropriate intraproduction relations encompassing auxiliary, not only basic, subdivisions have been mastered, is noteworthy. As a result, every worker is now interested in improving the indicators of activity of his subdivision and of the enterprise as a whole.

With the transition to leasing relations last year the Burunday Delivery Pipe Plant sharply improved its economic indicators. The level of production and labor discipline and the standard of labor are high here. Last year contractual delivery obligations were fulfilled 100 percent, labor productivity rose 18 percent, the profit plan was exceeded 3.4-fold, and production profitability reached 22 percent with a plan of 6.4.

On the basis of leasing relations high results were also obtained in transport. The experience of the motor column No 2588 of the Alma-Ata Production Freight Motor Transport Association is significant. Relations based on full cost-accounting principles were mastered in all four motor detachments there as of 1 January 1988. Every motor detachment includes drivers, an overall brigade of repairmen, a motor detachment chief, and a controller.

Individual leasing is widespread in the taxi pool No 1 of the Alma-Ata Production Passenger Association. In accordance with the contract a fixed sum is paid as rent, for which certain privileges in the purchase of spare parts are given.

Leasing has its characteristic features at domestic service enterprises. It is known here under the name of the "second contractual form." Its essence lies in the fact that the lessee, using the taken means of production, pays the lessor a fixed sum as rent. The sum of proceeds remaining after the payment constitutes the lessee's income.

The new form is also making its way in trade. Last year leasing collectives fulfilled the retail commodity turnover plan 108.1 percent and in public dining, 108.3 percent. Such results were attained owing to the greater interest on the part of members of these collectives. For example, they have no problems in connection with holding two jobs, interchangeability of workers, and operating conditions of stores. In leasing stores the standard of services is higher, the assortment of products produced by public dining enterprises has expanded, and the quality of prepared dishes has improved. In 1989 in the leasing collectives of the Alma-Ata City Administration of Public Dining the commodity turnover increased 1.7-fold, as compared with 1988, the turnover in the sale of products produced by them, 1.4-fold, labor productivity, by 18.9 percent, and average monthly wages, by 15.2 percent.

Leasing has shown high efficiency in fruit and vegetable produce stores of the Gosagroprom system. In Chimkent Oblast all 43 stores mastered it, in Alma-Ata Oblast, 92, or 63 percent of their total number, and in Karaganda Oblast, 47 (36 percent). In Alma-Ata's leasing stores last year the commodity turnover increased by 23 percent, labor productivity, by 37.3 percent, and wages, by 16.3 percent.

The experience in the introduction of leasing relations in various national economic sectors attests to the existence of various approaches to the selection of certain methods of management. Obviously, such a diversity should be welcomed, because thereby not only sectorial characteristics, but also the specific nature of every enterprise, are taken into consideration. Submitting this matter for your consideration, the republic's Council of Ministers proceeds from the fact that an extensive development of leasing will help to accomplish the strategic tasks of economic restructuring. At the same time, the lack of firm legal guarantees creates a lack of confidence among the people in the stability of new forms of management, owing to which their mastering is hampered seriously. Nor do the methodological materials and departmental normative acts worked out hastily promote this.

The provisional nature of many normative acts did not ensure sufficient scope for the development of advanced forms. It became obvious that it was impossible to manage without a law affirming the specific nature of leasing development. In the republic thousands of people ready to become true, not proclaimed, masters of production are now waiting for this law.

The main directions in economic development and the future of restructuring in economic relations are inseparably connected with the increase in the economic independence of production based on cost accounting, self-financing, and cost recovery. In this connection the proposed draft law represents a fundamentally new stage in the development of the economic mechanism, which will require changes in property relations, planning, distribution, taxation, the system of sectorial management, and other matters. This is the first real step toward the transfer of economic power to collectives and workers' organizations.

Permit me now to dwell on some difficulties and shortcomings in the development of leasing relations.

Despite the high efficiency of leasing demonstrated by practice the restructuring of intraproduction cost accounting on its basis is carried out extremely slowly. Essentially, organizational work in this direction at most enterprises and organizations is only beginning. In our opinion, first of all, the lack of proper initiative on the part of ministries and executive committees of local soviets of people's deputies hampers the spread of leasing relations in the republic. Two-thirds of the total number of industrial enterprises and organizations fully transferred to leasing relations are subordinate to the State Committee for Construction Affairs, the Ministry of Highways, and the Gosagroprom. In the system of the Ministry of Light Industry and the Ministry of Grain Products not a single enterprise was transferred to leasing. In the Ministry of Power and Electrification, the Ministry of Installation and Special Construction Work, and the Ministry of Local Industry corresponding work is carried out passively.

It is not difficult to understand the managers of these ministries: By giving out enterprises for leasing, they are deprived of the usual functions of their operational management. Cases of its "hindrance" on the part of ministries are not rare. Thus, the mentioned collective of the Burundai Delivery Pipe Plant, which became a leasing "pioneer" in the system of the Ministry of Land Reclamation and Water Resources, demonstrated this right to the ministry for a long time. The material incentive system developed at the enterprise could be "protected" only with the help of the Kazakh SSR State Committee for Labor. The Kapchagay China Plant was in a similar situation. It performed calculations and carried out preparatory work, but the Ministry of Light Industry established such normatives of deductions for it that the plant will immediately become unprofitable. The same situation also exists in the Administration of Work Mechanization-1 of the Almaatainzhstroy Trust, which for the second year cannot attain its transfer to leasing, because under various pretexts the trust hampers it.

Even in agriculture, where, as I have already said, a great deal of positive experience has been accumulated, leasing encounters strong resistance on the part of many managers and specialists burdened by administrative

command habits. With stubbornness worthy of a better application they try to extend the previous methods of labor organization and remuneration to new relations and to put the old content into the present-day form. This was discussed with great concern in N. A. Nazarbayev's report at the recent conference of the republic's agricultural workers.

As this has happened more than once, faulty practice can discredit a progressive undertaking, which society and the people need. To permit this would be an irreparable mistake. In connection with this I would like to draw attention to the fact that the draft law on leasing does not have the concept of "superior organization." In accordance with the contract the lessee independently determines the direction of his work, disposes of the products produced by him and of the derived income, and beyond the performance of his duties is completely free in his economic activity. If, however, the authorities do not want to let go of the lessee, an arbitration procedure for resolving the conflict is provided for.

The lessee's legal protection is increased significantly. No changes, even in legislation, can worsen his position. The terms of the contract retain their force for the entire effective period. The contract is the only document equally obligatory on the organization of lessees and on the lessor.

Such an extreme in organizational work, when leasing is imposed "from above," does not justify itself. For example, the Semipalatinskpromstroy Trust was transferred to it by order of the Kazakh SSR Gosstroy, not at the collective's request, in February 1989. However, as a result of such "initiative," not a single subdivision operated on the basis of leasing in practice, contracts were not concluded, economic independence and mutual economic responsibility were not determined, and the main problems concerning rent were not solved. Such, if I may say so, leasing did not affect lower levels of management at all.

To adapt leasing to the strong-willed command style of management is an absurdity and can give nothing but harm. The proposed draft provides for the independence of leasing enterprises and granting them extensive opportunities to dispose of their own resources efficiently, to use various material incentives for labor, and to enlist workers in production management and in the solution of problems of social development. The activity of the leasing enterprise is determined by a charter approved by the general meeting of its collective. This is the fundamental difference from the Law on the State Enterprise (Association) in effect, according to which the enterprise charter is approved by its superior organization.

The leasing enterprise independently determines the procedure of hiring and dismissing workers, forms and systems of wages, the daily schedule, the shift system of work, the procedure of granting days off and leaves (including their length), and many other matters.

It is stipulated that leasing is allowed in all national economic sectors. Of course, not all types of enterprises and property are subject to it. A special regime and significance for the country's and the republic's national economy can objectively require certain restrictions, which can be introduced by the USSR and the Kazakh SSR Government.

Legal norms regulating intrafarm leasing relations, which are contained in the draft law, provide great opportunities for a flexible combination of various forms of production organization. It is envisaged that they can include individual workers and collectives of subdivisions and can be applied both at state and at collective and public enterprises.

At the same time, the lessee assumes the duty of producing and transferring the products stipulated in the contract to the lessor, or on his instruction selling them to other enterprises and citizens, and has the right to dispose of what is produced in excess of the volume indicated in the contract at his own discretion.

In agriculture there are some particular features for this type of leasing. Here provision can be made for the right of the leasing collective to conclude on behalf of the enterprise contracts for specific jobs with citizens, who are not members of a given collective. Sovkhozes, kolkhozes, and other agricultural enterprises can grant leasing collectives of subdivisions on a contractual basis the right to independently sell the products produced by them and to use the derived income for wages, tax payments, payments in favor of the budget, and contributions for social insurance. Such collectives can open accounts in bank institutions or financial clearing centers.

The draft provides for the possibility of buying out the leased property both by collectives and individual citizens. After the property is bought out, the leasing enterprise, in accordance with the decision of its collective, can be transformed into a collective enterprise, a cooperative, a joint-stock company, or another type of enterprise operating on the basis of collective property.

Provision is made for the lessee's right to sell the produced products in any of the country's regions, to build on the received land plot—in agreement with the lessee—the necessary premises for production and non-production purposes, including housing, and to dispose independently of the proceeds from the sale of products (jobs and services) after paying the rent and taxes and making payments on bank loans.

Lessees can voluntarily assume the execution of a state order and sell all produced products at wholesale, purchase, retail, or contractual prices set for state enterprises. Material and technical supply and transport, repair, and other types of services in agriculture and other sectors are provided on the basis of contracts concluded in accordance with the procedure and under the conditions established for kolkhozes, sovkhozes, and other state enterprises.

Persons engaged in labor activity under individual or group leasing conditions are subject to social insurance and social security equally with workers and employees and the period of the lessee's work, during which insurance contributions have been paid, is included in the length of service.

Thus, recognizing the leasing form of property, we give the opportunity for its practical realization.

The republic's government also submits the Kazakh SSR draft law on peasant farming to deputies of the Supreme Soviet for consideration. We would like to receive your approval for it and to publish it in the press for discussion with a view to adopting it at the next session.

As is well known, the establishment of a diversity of property forms and management methods is the strategic line of present agrarian policy. Along with sovkhozes, kolkhozes, and other forms of management it is considered necessary to revive and strengthen peasant farms. Now their number in the republic reaches 292. The biggest number of these farms is in Dzhambul and Alma-Ata oblasts. For now they do not exist in Guryev, Kzyl-Orda, Kustanay, North Kazakhstan, Semipalatinsk, and Tselinograd oblasts.

The establishment of peasant farms is based on land leasing on sovkhozes and kolkhozes and on private full or partial ownership of the means of production. Those who work according to the principle of peasant farms attain good results. Thanks to farmers, settlements and auls, which were previously abandoned and considered unpromising, are reviving.

Kenes Berekeshev's peasant farm consisting of eight people was established on the Akkozinskiy Sovkhoz in Karatobinskiy Rayon in Ural Oblast in 1989. With the loan of 152,000 rubles received in the bank he purchased 1,500 sheep, two tractors, a truck, a set of agricultural implements, and a two-story house. He leased 3,000 hectares of hayfields and pastures for 25 years. Already in the first year this farm produced products worth 77,200 rubles.

The experience in labor organization on the farm of the Yesmurzayev family of sheep breeders from the Shaulderskiy Sovkhoz in Kzylykumskiy Rayon, Chimkent Oblast, is interesting and instructive. Through its efforts this previously desert place is being transformed into an oasis. It has 1,500 sheep, including 800 ewes. Last year 1.3 tons of wool and 14 tons of weight gain were obtained from them and every 100 ewes produced 110 lambs. The net income totals 15,000 rubles. Moreover, the family grows successfully and sells potatoes and vegetable and melon crops.

Today no one doubts the need to develop peasant farms. However, they are being born slowly and with difficulty. Many managers still have a guarded attitude toward them and in a number of places land is not granted, equipment is not sold, and methodological and other help is not given to them.

Peasants themselves often do not rush to become farmers. They are overcome by doubts: Are the occurring transformations for long? Peasant farms are still perceived in an unfriendly manner in localities because of allegedly high earnings. At the same time, their main advantage—striving for highly productive labor with initiative—is ignored.

Today the task lies in creating legal, social, economic, and material conditions for equality of various forms of management. There is a need for guarantees and for a law, which would protect the rights of arising peasant farms. The draft of such a law submitted for your consideration reflects the principles of their establishment and activity. Giving land for lifetime inherited possession or for leasing are the main ones. A farm, having land in its possession, can additionally lease plots. The peasant can become the owner of equipment, structures, and livestock, determine the structure and volume of production, dispose of the produced products, and open accounts in a bank department.

Land will be granted by executive committees of local soviets. Since virtually all of it in rayons is assigned to sovkhozes and kolkhozes, competent deputy rayon commissions are needed for its redistribution. Individuals with specialized agricultural knowledge and practical experience in work in agriculture will have the priority right to receive plots. The size of land is determined by executive committees of rayon (city) soviets with due regard for local conditions, farm specialization, and the possibility of cultivating it with the peasants' personal labor.

In case of production need, for example, in the event of a big harvest, sickness of members of the peasant farm, and so forth, the use of hired labor is permitted. However, for hiring workers the owner must pay a tax to the state and guarantee the social protection of hired workers.

The independence of the peasant farm is connected with the right of ownership of the grown products. The efficiency of their centralized purchase is often overestimated in localities. Some people have even proposed the establishment of a state order for peasant farms. The principle of voluntary participation must be observed here. Time will pass and the owner himself will become convinced that the state order, as a guaranteed sale at good prices, is a blessing to him. After all, in this case he will receive all resources at the prices set for sovkhozes and kolkhozes and products will be bought from him at the same prices with differentiated increments.

It should be especially noted that family production does not presuppose the destruction of other forms of labor organization, primarily sovkhozes and kolkhozes. The peasant farm is considered only one of the forms of diverse and multivariant types of producers. Under conditions of the existing stock distribution system and universal shortage it should be placed in an equal situation with sovkhozes and kolkhozes. It is necessary to give

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it every kind of help in land allotment and in the purchase of reliable equipment and to give thought to the establishment of an agricultural service and rental centers in the system of the Agricultural Equipment Association.

Industrial enterprises can take part in the development of peasant farms, receiving meat, milk, vegetables, and other products from the farmer.

At the initial stage it is necessary to give the peasant farm preferential or even outright loans for the purchase of the basic means of production by instalments. Members of the peasant farm are responsible for their debts with their personal property. In case the timely return of the received loan is not secured, the bank can use the right to sell this property and to assign the proceeds from sale for paying off debts.

Economic independence is fully connected with responsibility for the results of activity, whose criterion profit is. Part of it will also be assigned for the social development of rural areas in the form of income tax.

The amount of the tax should be differentiated depending on the farm's distance from the village and the city, the quality of land, specialization, and other factors. It is important not to tax the part of the peasant's farm profit assigned by it for production development and housing construction.

The peasant must be interested in investing money in land improvement and in the processing and storage of grown products. Executive committees of rayon (city) soviets have the right to exempt it from paying the agricultural tax for the first 5 years, as well as to grant privileges when it is collected.

The right to terminate the activity of a peasant farm when a plot is used not for the production of agricultural products and when there is a destructive attitude toward land, owing to which it is depleted or is brought to a neglected state, is reserved to soviets of people's deputies.

The adoption of such a law will enable the most active peasants to work independently and to acquire confidence in the success of their endeavor. The growth of the number of their farms will contribute to an increase in the republic's food stock, the revival of the activity of sovkhozes and kolkhozes, and their internal transformation.

The dynamic development of public production and the solution on this basis of complex, but urgent, problems of improving the people's well-being require fundamentally new production relations and conditions for truly socialist, free, and creative labor of the Soviet people.

In this connection the adoption of Kazakh SSR laws on leasing and on peasant farming is of exceptionally great importance. We are convinced that with their entry into force every leasing collective, lessee, and peasant will acquire true economic independence and the feeling of

being the master. They will move the people from positions of indifference to positions of creative, interested, and highly productive labor.

During the preparation of the drafts proposals by executive committees of soviets of people's deputies, ministries, and departments, as well as individual citizens, were examined. All of them were carefully studied and taken into consideration. Their implementation will require a great deal of organizational work in localities, primarily on conveying their meaning and content to every enterprise, sovkhoz, kolkhoz, soviet of people's deputies, and worker.

The republic's Council of Ministers requests that the raised questions be examined and decisions on them be adopted.

Comrade deputies! Please permit me to submit for your consideration another extremely important matter connected with the adoption of additional measures to provide the republic's national economy with material and technical resources.

In November of last year you approved the State Plan for the Economic and Social Development of the Kazakh SSR for 1990, which envisaged the implementation of a number of measures to improve the economy and to raise the people's well-being. In particular, during the current year it is planned to increase the volumes of industrial production by 3.3 percent, of the production of consumer goods, by 11.1 percent, and of paid services for the public, by 18.6 percent. The scale of construction in the social sphere is to be increased significantly: the volume of construction and installation work, by 15 percent and the commissioning of dwelling houses, by 370,000 square meters.

At the same time, the provision with basic types of material and technical resources has decreased significantly as compared with last year. For example, with respect to ferrous rolled metal products the current year's limits were reduced by 325,000 tons, or by 12 percent, as compared with the 1989 level, steel and cast-iron pipes, by 63,000 tons (3 percent), commercial timber, by 99,000 cubic meters (4 percent), sawn timber, by 195,000 cubic meters (23 percent), cement, by 1.1 million tons (16 percent), and so forth.

This evokes serious concern for the fate of the plans outlined for the current year. In order that the formulation of the question may be understood, it should be noted that the USSR Law "On the State Enterprise (Association)" and the existing procedure of delivery of products gives enterprises extensive rights to an independent sale of products produced in excess of the state order and the plan. In connection with this manufacturing enterprises refuse to offer products produced by them in excess of the state order and the plan to Kazakh SSR Gosnab bodies and independently conclude contracts for their delivery at their discretion, including for export and outside the republic.

As a consequence, out of the plans for the output of products in excess of the state order in the volume of more than 200 million rubles envisaged by suppliers, only 9 million rubles' worth of such products were offered to Kazakh SSR Gossnab bodies and contracts for their wholesale purchase were concluded with them. But the volume of cement production free of centralized distribution, that is, planned for output in excess of the state order, totals no less than 3,662,000 tons, of slate, 23.7 million standard tiles, of rolled ferrous metal products, 241,000 tons, of commercial timber, 22,800 cubic meters, of sawn timber, 5,500 cubic meters, of heating radiators and convectors, for 105,000 kw, of sanfaience, 31,500 pieces, of lathes, 120, and of bulldozers, 276, including many other products produced by Kazakhstan's enterprises and sold by them independently without due regard for the republic's national economic needs.

The situation with the balancing of plans with material resources has become aggravated owing to the fact that a number of Union republics have adopted legislative acts prohibiting the shipment of all the products produced by them in excess of the state plan outside their borders. This has led to the fact that our Gossnab bodies, enterprises, and organizations are deprived of the possibility of buying the necessary products in some republics.

Under existing conditions we see no other way out than, as an exception, to limit the possibilities of enterprises to ship products produced by them additionally, in excess of the state order, outside the republic's borders. Comrade deputies, this measure is temporary—for about 1 year—and when conditions for normalization of material and technical provision are created, it will be necessary to give it up. We are now forced to propose it as an emergency measure. Otherwise our social programs will be under the threat of disruption.

With your consent the list of such products will be determined by the Kazakh SSR Council of Ministers. We ask that you support our proposal.

#### Difficulties Face Lithuanians Returning to Land

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[Interview with S. Pechyulis, director of the Administration of Farm Enterprises by T. Doval: "Difficult Return to the Land"]

[Text] During this time of perestroika there is no shortage of various innovations and transformations. Signs change with dizzying speed. The agroprom [agroindustrial association] has been forgotten; now once again we have a ministry of agriculture. Within it another sign has appeared on the door: "Administration of Farm Enterprises." Its director is V. Pechyulis. From which "top administration" did he come? Actually he came from below. He worked (among other places) as the senior agronomist of Sheshuvis Kolkhoz. Yes, this is the same kolkhoz in which one of the first farmers in the

republic, Telesforas Yushkis, is working. It can be said that to some extent V. Pechyulis was his godfather in terms of farming...

So it happened that I began my interview with V. Pechyulis somewhat aggressively.

[Doval] Well, Vitautas, hardly has the Lithuanian peasant set off on the path of independent management and already a director has been placed above him in the capital. Our new farmer wants to be rid of his kolkhozsovkhоз and rayon controllers...

[Pechyulis] Although I am in charge of the entire administration, it actually consists of two people besides myself. There are no departments, subdepartments, or expanded staffs, as you can see, even in mind. There is a highly trained economist and a specialist on material-technical supply. This is the staff that has "sat on the necks" of the Lithuanian farmer. I believe that the Lithuanian farmer is far from the thought of getting rid of us. In our office the telephone rings from morning until night and the doors never close. Those who turn to us have one question: How is it best to organize farm enterprises in Lithuania? More precisely, how is it best to revive them? Frankly, all our visitors are confused. After all, they come here from the most distant corners of the republic more often than not with their unsolved problems. There is an abundance of them. Newspapers write with enthusiasm of the joys of the farming life, saying that the Lithuanian farmer will soon catch up with his Swedish and Dutch colleague and surpass him, will produce so much bacon that we will not know what to do with it. Of course there are many happy farmers, so to speak. From the very beginning they found understanding in the kolkhoz or sovkhoz and among neighbors. I am not talking about these right now. I am talking about those people who sigh and ask why they are being deprived of the dream that they have had for many years to have their own plot of land, their own farm. This is not at all an unsubstantiated statement. According to our information, 342 persons who wished to did not receive permission from kolkhozes and sovkhozes to have their own plot of land.

[Doval] But perhaps there were weighty reasons for this? Let us say that perhaps these are careless people, or lazy. Is there any point in squandering the land?

[Pechyulis] No one is arguing that a candidate should be examined from all sides. But there are instances of completely scandalous disgrace. The family of tractor operator Zigmantas Balko of Sintautay Kolkhoz, Shakayevskiy Rayon, submitted a petition in July of last year with a request for a 30-hectare allocation. The family was motivated by the fact that both intellectually and materially it was ready to cultivate the land. It had already purchased 11 pieces of equipment ranging from a tractor to a press-hay collector. And did the family's wait result in a positive outcome? On the contrary. A refusal followed, personally by the kolkhoz chairman, Yu. Yutsaytis. (The kolkhoz also has not yet managed to have a

general meeting of kolkhoz farmers to discuss this question). Since when has the chairman had the land, which after all is not his personal property, at his disposal? Probably from the minute that he became such a little prince. Thus who can deny that the director of the present kolkhoz or sovkhoz is the modern-day land-owner?

I will cite another example. Economist Birute Murauskene of Veshvile, Yurbarskiy Rayon, writes us that she begged local "landowners" to give her 15 hectares of land that once belonged to her parents. It would seem that this family was well suited for this—the husband is a village worker, the daughter is majoring in the study of agronomy, and the old people and kolkhoz retirees and still strong—who if not they should begin a farmstead? But the response was no; the request had fallen upon deaf ears. This is what is destroying the peasant's belief in the possibility of transforming the village. One has to ask oneself how people feel in Lenino Kyalyu Kolkhoz, where matters almost reached the stage of hand-to-hand combat—the chairman is not "permitting" peasants to become farmers and that is the end of it. If the kolkhoz itself were strong that would be one thing, but it is very weak. If the people disappear then what point will there be in paying the chairman's salary? Thus he is afraid of the winds of change. No law needs to be regarded by him—he does whatever he wants on his "estate."

I have also noticed the following law. The "heads" of strong kolkhozes and sovkhozes willingly support farming. They, incidentally, have been abroad and have seen that this method of management fits in excellently with other forms of agricultural management and most importantly—that it is advantageous both to the person and to the state.

I do not accept managers who sit in worn offices and operate according to the principle, "If I don't have it, no one else will either." Isn't it time to stop swatting the peasant in the head? Is this coarse? I do not want to lisp, and do not have a right to either. I see how people have awokened, have roused up—should we allow this spark to die? No. If you don't want to help the peasant, then at least get out of the way of those who do!

[Doval] How long will your short fuse last you?

[Pechyulis] Until the complaints that we talked about above cease. Of course other problems cannot be solved by energy alone. It is essential to have laws that protect the interests of the farmer. As early as November we proposed to the republic's supreme soviet supplements to the Lithuanian SSR Land Code. The essence of the correction had to do with the following. In the case of a dispute between a peasant and a kolkhoz (sovkhоз) about land, the local soviet should have the last word. Unfortunately, even now this question remains open, and as you can see it gives rise to a mass of conflicts.

Incidentally, we are giving the closest attention to the development of laws. Laws are still imperfect (after all,

there has not been a phenomenon such as farming). We are working closely with lawyers. Incidentally, A. Raudonyus, the director of our ministry's legal department, is registered as a deputy candidate of the republic's supreme soviet in Pagegyay. He was nominated as candidate by the Shilutskoye Division of the Lithuanian Farmers' Union. We are glad that a people's deputy will be able to defend the rights of farmers (if he is elected). Moral support is very important in every matter and especially in a matter such as farming here in Lithuania.

[Doval] Material support is probably no less important?

[Pechyulis] This is a special subject, a very extensive one. Let us look at least at financing from the state budget. As you know, we have an enormous number of plans. They are composed years in advance. When we were "sorting out" our finances for the current year we heard about farming only in the U. S. But thank goodness that locally without special instructions we decided to allocate funds for peasant enterprises with a consideration of a growth in their number. So our brother "bureaucrat" has not become totally bureaucratized. I am convinced that it will not be difficult for farmers from Shilutskiy, Anikshchayaskiy, Raseynskiy and other rayons to install electricity, to fix up roads, to bring telephone lines to the farmstead and so forth. This I understand. This is a real concern.

[Doval] What about building materials? In the kolkhoz professional pushers knock themselves out trying to obtain a truckload of brick, and here we have individual farmers. Or is the equipment for the farmer? Sometimes one hears the joyful story on the radio or television that a clever fellow has put together a mini-tractor. But is this the answer?

[Pechyulis] Not at all! The peasant has to plow, sow and feed his livestock and not be involved in amateur machine building. What should we do? We should develop direct ties with large equipment-manufacturing plants. One hundred fifty commercial centers have been created in the country with which any farmer can institute contract relations—he delivers his products to the plant and the plant supplies him with the equipment he needs. In the office we have information about where all these centers are located and we are prepared to do business with them. The farmer himself will not have to take his pork all over the place in order to acquire the needed nut in return. There will be a middleman.

[Doval] But here is the snag. Is it advantageous to the republic to have farmers conclude contracts, let us say, with the Kharkov and Vladimir tractor plants and send their meat and smoked goods there? After all, we ourselves do not have an abundance of such products on our tables.

[Pechyulis] This is truly a complicated question. I think that these kinds of contracts can be concluded only if the farmer has fulfilled republic state orders. In other words

he himself can freely dispose only of above-plan (to express myself in the old way) production. At least this is what is planned.

[Doval] You mentioned state orders. In meetings with farmers I heard the same question over and over: How is it planned to sell products from peasant enterprises—either as before through kolkhozes and sovkhozes (counting towards the fulfillment of their plans), or does the individual have the right to independently conclude contracts with the state? Can he individually receive state orders?

[Pechyulis] Without doubt he can. Moreover, he himself determines the amount of milk, meat and other products he will deliver. State orders are implemented by administrations of agriculture of rayon executive committees. Here it is important to note that state orders are very prestigious—they will be paid for at the rate of state procurement prices and by the corresponding supplements for quality, and will also offer the proprietor the advantage of purchasing mineral fertilizers, equipment, building materials and so forth. Thus I assume that competition may even develop among farmers to receive state orders. Incidentally, the production profile of farmsteads will be regulated by state orders. For example, today we have a shortage of buckwheat which has become almost an overseas product because of its laughably low procurement price. The state will order buckwheat at elevated prices and will offer material-technical resources. Is this advantageous to the farmer? Of course. He will begin to cultivate buckwheat. The same is true for other products as well.

[Doval] The question of prices is so urgent right now for the village that it is creating entire storms in society. Here is the conclusion some people have reached: They are calling upon farmers to strike against low procurement prices. It is true that they are doing this anonymously.

[Pechyulis] They are doing this anonymously because they could not hope for the support of kolkhoz farmers or sovkhoz workers, or especially of farmers. A person with a healthy mind will not choose this path—a cow is not a machine tool, it cannot remain long untended, it will die...But on the other hand, how long can we put up with the mockery of farmers, when milk is less expensive than sweetened water? We are convinced that ordered prices must extend to farming enterprises. Everything should be regulated by economic methods and order will prevail.

[Doval] Perhaps then your administration will no longer be needed?

[Pechyulis] And even if that is so, we will be happy about it. I personally am not holding on to my chair. I will take a plot of land. This is no joke. I am an inveterate beekeeper and I will not perish. I will follow the farmer's path. It is not an easy one but it is attractive to those who want to prove to themselves and to others that the Lithuanian land is not scant of real managers.

## POST-PROCUREMENT PROCESSING

### Progress in Improving Processing, Storage Reviewed

#### Support Required From Machinery Sector

904B0190A Moscow *PLANOVYE KHOZYAYSTVO*  
in Russian No 3, Mar 90 pp 113-118

[Article by Ye. Belov, deputy chief of a department of the USSR Gosplan: "Preservation and Processing of Agricultural Products"]

[Text] The retooling of agriculture and strengthening of the material and technical base of the industry's processing sectors represent the main way of eliminating losses \* Problems of mechanization of production processes in plant growing and in the development of food sectors \* Priority directions in the economic and social development of APK sectors during the 13th Five-Year Plan.

The long stagnation in the agrarian sector did not make it possible to achieve the necessary rates of development and to reach the indicators of most types of agricultural products set by the Food Program. The shortage of food and of raw materials for the processing industry is still felt acutely. In 1989 the population's unmet demand for food products totaled 40 billion rubles.

On the basis of a combination of radical transformations in economic relations with an acceleration of scientific and technical progress and social restructuring of rural areas the government set the task of reducing the food shortage to one-half in 1992. During this period the supply of dairy, fish, confectionery, and macaroni products, vegetables, and so forth for the population should be improved.

A reduction in losses of agricultural products during harvesting, transportation, and processing is an important source of replenishing the food stock. At present 20 to 30 percent of various types of products do not reach the consumer.

The establishment of a modern material and technical base in all sectors of the agro-industrial complex is the main way of reducing losses. For these purposes the Five-Year Plan for the Economic and Social Development of the USSR National Economy for 1986-1990 determines specific measures to increase the production and deliveries of agricultural machinery, specialized transport, and technological equipment and to build up capacities for the storage and processing of agricultural raw materials with the utilization of the capabilities of associations, enterprises, and organizations of all industrial sectors for this.

How are they being realized?

Almost 308 billion rubles of capital investments, or 17 billion more than envisaged by the five-year plan, are to be utilized in the agro-industrial complex in 1986-1990.

At the end of 1990 the value of fixed productive capital will reach more than 530 billion rubles and, as compared with 1985, will increase by 28 percent, including the active part of productive capital for agricultural purposes, by 24 percent.

About 1,200 agricultural machines and more than 2,200 types of technological equipment are now produced serially. At kolkhozes, sovkhozes, and interfarm agricultural enterprises there are 2,803,000 tractors, 751,000 grain harvesting combines, 2,510,000 trucks, and many other agricultural machines.

During 3 years of the current five-year plan, as compared with 1985, the annual output of tractors and the daily output of corn, silage, fodder, and flax harvesting combines have increased slightly at kolkhozes and sovkhozes, which has made it possible to shorten the time of harvesting and harvest losses. In 1987, as compared with 1980, the labor intensiveness of output was reduced by 19.4 percent, of fuel intensiveness, by 9.8 percent, and of capital intensiveness, by 8.8 percent.

However, the level of technical equipment of the agro-industrial complex lags behind present production requirements. At the same time, nonfulfillment of the assignments of the 1986-1990 Five-Year Plan for the delivery of tractors, including of the MTZ [Minsk Tractor Plant] type, grain harvesting combines, and machines for plant growing and animal husbandry is expected. Furthermore, as an analysis shows, in a number of republics and oblasts the level of operation of the machine and tractor pool rises slowly and in some of them even declines. Owing to organizational and technical reasons, in the country the idle time of tractors is equivalent to their annual delivery and that of grain harvesting combines, to almost one-half of their annual delivery.

The shortage of machines and their weak utilization do not make it possible to overall mechanize the production of agricultural products and lead to failure to keep to the optimum agrotechnical schedules of performance of field work, to an incomplete harvest, and to losses of products. During the 11th Five-Year Plan, owing to the underthreshing and leakage of grain through loose couplings in combines, approximately 5 million tons of grain were lost annually. Furthermore, owing to the lack of reliable and highly productive combines, the harvesting of grain crops lasted 25 to 27 work days instead of 7 or 8 days established by agricultural schedules, which led to daily losses of up to 1.5 percent of the harvest and to annual losses of 12 million tons.

Owing to the insufficient equipment of agriculture with machinery, there are big expenditures of manual and heavy physical labor. At present 24 million people are engaged in agriculture, including more than 13 million, in manual work. Agriculture and processing industry sectors are not yet provided with the means of production in terms of the necessary scale and list. For example, the need for trucks and tractors is met 80 percent.

Kolkhozes and sovkhozes are especially poorly supplied with wheel row-crop tractors of Belarus, T-25, T-30, and T-16M types. Kolos and Sibiryak, extremely unreliable and unproductive grain harvesting combines, which have now been removed from production, used to be supplied to agriculture. Niva combines, against which machine operators have many complaints, have been manufactured since 1970. Nor is the Yenisey-1200 combine, which has replaced Sibiryak, in demand. The economic effect from the Don-1500 combine is also negligible. According to numerous comments by agricultural workers, it is unreliable, heavy, and expensive and is not fitted with the necessary devices. The output of some types of grain harvesting combines (rotor and trailed combines and combines of a steep-slope modification) has not been organized to this day.

Sets of machines for vegetable raising, potato growing, fruits, and industrial crops are developed slowly. Now the planting of vegetables at kolkhozes and sovkhozes is mechanized only 62 percent and their harvesting, only 20 percent. Combines harvest only 55 percent of the potato areas and 45 percent of the cotton areas. Meanwhile, in the United States the level of mechanization of row crop and cotton cultivation approaches 90 percent and the harvesting of carrots, radishes, and beans is mechanized fully and of tomatoes, 70 percent.

Losses of coarse and succulent feed are estimated at approximately one-third of its total yield, mainly owing to the deviation from the optimum time of harvesting and the shortage of the storage base. The need of kolkhozes and sovkhozes for feed harvesting combines is met 70 percent, for hay pick-up balers, less than 60 percent, and for mowers, 88 percent. Owing to this, the labor intensiveness in feed procurement has remained high during many years. Furthermore, the shortage of machinery leads to protracted feed procurement periods; hence the decline in the quality and big losses of feed.

The situation becomes aggravated by the fact that in key indicators fodder harvesting machines do not meet present requirements, are inferior to the best foreign analogs, and operate poorly. The poor mincing of grass, corn, and other feed lowers the dairy and meat productivity of cattle, owing to which the country fails to obtain millions of tons of the most valuable food products.

The renewal of fodder harvesting machinery is carried out slowly. To this day the planning of 7 out of 36 machines subject to development in 1983-1988 has not been completed and the output of 8 out of 28 new and modernized machines subject to mastering in production has not begun.

It should be noted that fodder harvesting combines—self-propelled KS-100A and trailed KPKU-73 combines—manufactured by the Gomselmarsh Production Association have become obsolete and are unproductive and unreliable. However, the shortage of fodder harvesting machines puts farms in a hopeless situation and forces them to buy virtually everything that is offered by

enterprises of the USSR Ministry of Automotive and Agricultural Machine Building. The use of such machinery raises the cost of feed production. For example, since 1980 production costs of hay and silage procurement have increased by an average of 15 percent.

There is still a delay in the development of new fodder harvesting machines, although the situation requires the adoption of decisive measures to rectify the existing situation.

It is well known that the planning and output of new machinery are carried out on the basis of an especially drafted document—**System of Machines for Overall Mechanization of Agricultural Production**. It is planned for a 10-year period with a correction every 5 years. The existing system approved for 1986-1995 is directed toward the provision of intensive, soil protective, and energy saving technologies with machines, overall mechanization of cultivation processes, and harvesting and postharvesting processing of 118 agricultural crops.

In accordance with this system 1,607 types of equipment subject to output during the current Five-Year Plan have been assigned to the USSR Ministry of Automotive and Agricultural Machine Building. On 1 January 1989 almost one-third of the machines were not put into production owing to nonfulfillment of the plans for commissioning capacities for the production of agricultural machines and spare parts for them and for other reasons. In 1987 it [sic] was fulfilled 96 percent, in 1987, 58 percent, and in 1988, only 18 percent.

The technical level of machines supplied for rural areas remains low. Almost one-half of them are of an obsolete design not meeting present requirements. Soviet machines are much inferior to foreign analogs in their quality, reliability, productivity, power consumption, and metal intensiveness. The mean time between failures of our best tractors does not exceed 300 to 450 motor hours and that of American tractors, 1,000 and more; of Kolos and Niva grain harvesting combines, 6 to 10 motor hours and of Don-1500, 14 hours, whereas that of foreign New Holland S-1550 and International Harvester-149 combines, 62 and 104 motor-hours respectively.

Soviet tractors and combines have a comparatively higher specific material intensiveness than foreign models. This leads to overcompaction of the soil and to a decrease in the yield of agricultural crops, as well as to additional power expenditures.

In connection with the low quality and reliability of machines in agriculture the sphere of their repairs has increased excessively. More than 7 billion rubles, or 76 percent of the funds allocated by farms for the purchase of new machinery, are spent annually on repairs and technical servicing of machines and equipment. The expenditures on these purposes in the total value of machinery exceed 12 percent and of the tractor pool, 19 percent. In the United States these expenditures make up 7 percent and in Great Britain, 7.5 percent.

Problems of strengthening the **material and technical base of the industry's processing sectors** arise with special acuteness. A large quantity of agricultural produce does not reach the consumer, owing to its extremely weak development. For example, 260 kg of potatoes per resident are now produced in the country, but only 106 kg of potatoes are used for food purposes; 68 kg of meat products per resident are produced, but only 64 kg reach the table; 40 kg of fish per person are caught, but only 18 kg are used in food. There is a similar situation with grain, vegetables, and sugar beets. Sugar losses during the harvesting, storage, and processing of sugar beets reach more than 1 million tons. In our country 1.3 units of agricultural raw materials per unit of finished food products are expended, whereas in developed countries, 1.02. A significant number of enterprises of the industry's processing sectors were built before the revolution. Only one-fifth of the enterprises and shops presently operating throughout the country meet modern requirements and 38,000 facilities need modernization. However, the replacement of worn out and obsolete equipment does not exceed 6 percent annually.

The State Plan for the Economic and Social Development of the USSR for 1986-1990 provides for the allocation of 28.3 billion rubles of capital investments, or 1.8-fold more than during the 11th Five-Year Plan, for the development of meat-dairy, food, fish, hulling-milling, and mixed feed industries. A significant increase in the commissioning of production capacities for almost all food sectors is planned.

The average annual rates of growth of capital investments in processing sectors exceed the rates of growth of capital investments allocated for the development of the agro-industrial complex as a whole, including the investments of capital in the meat and dairy industry have increased 1.4-fold. However, the allocated funds are utilized inefficiently and a breakthrough in this important matter has not occurred. In 3 years (1986-1988) about 14.1 billion rubles of state capital investments, or 91 percent of the 3-year limit, were utilized in these sectors. Fixed capital in the volume of 12.8 billion rubles was put into operation in the industry's processing sectors during that time. In 1988, as compared with 1985, its growth made up only 13 percent and that of the capital-labor ratio, 16 percent. Fixed capital worth only 91 kopeckes per ruble of utilized capital investments was put into operation; hence the rise of 0.7 billion rubles in the volume of incomplete construction.

The commissioning of production capacities of the industry's food sectors is carried out with a significant lag. In 3 years the assignment for commissioning production capacities for the production of granulated sugar set by the five-year plan was fulfilled 65 percent and of oil seeds, 76 percent; for the production of meat, 93 percent and of canned fruits and vegetables, 93 percent; for fish processing, 54 percent; for the commissioning of elevators, 78 percent, hulled product enterprises, 79 percent, and refrigerators, 74 percent. Nor did the state of affairs improve in 1989. It should be noted that local

Soviet and economic bodies and managers of enterprises do not pay proper attention to the development of the production base of APK processing sectors, although extensive rights have now been granted to them. Beginning in 1987 all indicators of capital construction plans are determined **independently** by sovkhozes, kolkhozes, and other enterprises and organizations of the agro-industrial complex within the limits of the total volumes of capital investments set for them. Title lists for the planning and construction of projects valued up to 8 million rubles are approved by republic and local bodies.

Capital investments for the development of the agro-industrial complex are allocated to Union republics in one line without a breakdown by sectors and they have the right to assign them to processing sectors in the necessary volume for the fulfillment of the set assignments for commissioning production capacities. Having their own construction organizations at their disposal, republic and local bodies independently approve plans for contract work for them.

Furthermore, the retooling and reconstruction of existing enterprises as of 1987, when they are transferred to full cost accounting, are carried out with the internal funds of enterprises in accordance with the decisions of labor collectives. The right to order planning estimates and to approve them and the title lists for reconstruction and retooling is granted to enterprises.

However, many problems are solved slowly by republic and local bodies. For example, owing to the untimely examination of problems concerning the siting of enterprises and preparation of planning documents alone, the commissioning of more than one-half of all the capacities was postponed to the last 2 years of the five-year plan.

Proper control over the course of construction of enterprises has not been organized and they are built with a disruption in construction length norms. The number of late completions of projects is growing. Meat combines in the cities of Uyar in Krasnoyarsk Kray, Kalachinsk in Omsk Oblast, and Melitopol, the glue plant in Yaroslavl Oblast, the Tyret salt mine in Irkutsk Oblast, and others have been under construction for 10 years and longer.

The slow construction of processing industry enterprises is also due to a large extent to the **lack of individual types of equipment**. In 1986-1988 technological equipment worth 3.5 billion rubles was delivered to APK processing sectors. Although this is more than during the years of the 11th Five-Year Plan, the assignment of the five-year plan was underfulfilled.

For example, in 1988-1990 enterprises of the USSR Ministry of the Aviation Industry did not manufacture—postponing to the 13th Five-Year Plan—30 automated lines for the production of macaroni products, nor did they manufacture 266 automatic measuring-filling, pre-packing-wrapping, and washing machines for fruits and vegetables.

The network of small-capacity bakeries is to become a big help in the population's provision with "hot bread." However, ministries of machine building and defense complexes (head ministry—the USSR Ministry of General Machine Building) did not fulfill the assignments for the organization of the production and delivery of equipment for such bakeries. As a result, the sector failed to receive 130 sets of the indicated equipment.

Nor did ministries of defense sectors supply crushers, homogenizers, units for dough preparation, cooling installations, and other equipment, which did not make it possible to ensure the prompt outfitting of projects under construction and reconstruction with the necessary equipment and led to a disruption in the commissioning of production capacities. At the same time, as of 1 January 1989 uninstalled equipment worth 1.7 billion rubles, including imported equipment worth 0.5 billion rubles, accumulated at warehouses of agro-industrial associations and enterprises under construction. In 1988 stocks of equipment increased by 143 million rubles. The RSFSR alone has such equipment worth 508 million rubles, including imported equipment worth 147 million rubles.

Selective inspections by the USSR Agro-Industrial Bank have shown that one-half of the **warehouse stocks** of imported equipment are transferred for installation late owing to the failure to keep to planned construction schedules, which, as a rule, leads to the loss of guarantees of foreign firms for it.

During the 12th Five-Year Plan it was planned to put into operation almost 1.3-fold more facilities for the storage of potatoes, vegetables, and fruits than during the 11th Five-Year Plan. In 1986-1988 the assignment for the construction of these facilities was overfulfilled. The commissioning of refrigerators in meat, dairy, and fish industries was also increased slightly. In order to speed up the construction of modern storage facilities and refrigerators, two plants for the industrial production of storage facilities and one plant for refrigerators—also from light metal structures—were built during the current five-year plan.

The plan of the All-Union Soyuzpromteplitsa Association envisages the production at these enterprises in 1990 of structures for storage facilities with a total capacity of 530,000 tons of products and for refrigerators for 60,000 tons of one-time storage and their delivery to clients. These capacities will increase in the next few years.

In 1990 a total of 63.6 billion rubles of capital investments are allocated from all financing sources for APK development. This is 1 billion rubles more than envisaged by the five-year plan and 5.7 billion more than the 1989 plan. Capital investments and limits of contract work for the development of the social sphere and the industry's processing sectors will be allocated on a priority basis. As compared with 1989, in the food industry they will increase by 10.1 percent, in the meat and dairy

industry, by 20.5 percent, and in the development of agriculture, by 1.5 billion rubles and will total 34.2 billion rubles.

At the level of assignments of the five-year plan councils of ministers of Union republics and the USSR Ministry of the Fish Industry envisaged the commissioning of capacities for the production of margarine products and meat, milling enterprises, sea port wharves, and facilities for the storage of potatoes, vegetables, and fruits. However, the indicators for the commissioning of capacities for the output of granulated sugar, vegetable oil, canned fruits and vegetables, potato products, and cheese and of fish processing enterprises were envisaged at the level of 38 to 57 percent and of elevators and hulled product enterprises, of 18 to 24 percent of the assignments of the five-year plan for 1990.

The 1990 plan assigns limits to the agro-industrial complex for tractors, trucks, excavators, and bulldozers in accordance with the assignments of the five-year plan, for scrapers, at the level of the 1989 plan, and for MTZ-type tractors, 95,000 units—10,000 more than in 1989. The output of small-scale mechanization equipment will double or triple. However, owing to the limitation of production capacities, the need for this equipment is not yet met fully.

The volume of production of technological equipment for APK processing sectors will increase by 42 percent, as compared with the level of 1989, and by 44 percent, of the five-year plan. At the same time, the composition of the state order for the most important technological equipment has been expanded to 82 group items, as compared with 55 in 1989, and in terms of value will total 1,312 million rubles—57 percent of the total production volume.

Sets of low-capacity equipment for shops for the production of canned fruits and vegetables, meat processing enterprises, bakeries, sausage shops, milk plants, cheese production, and so forth will be delivered to kolkhozes and sovkhozes.

For the purpose of regulating the supply of the agro-industrial complex, a new procedure of organization of material and technical provision has been established. It envisages the priority shipment of products of the enterprises and organizations of this complex.

The USSR Gosplan and the USSR Gossnab have expanded the composition of the state order for the APK. It includes such key types of material and technical resources as trucks, buses, tractors, fodder harvesting combines, white tin, cold rolled steel strip, accumulators and lead storage batteries, tires for trucks, and so forth.

It has been established that ministries and departments ensure the conclusion of contracts by subordinate enterprises with bodies for material and technical supply of the APK and with territorial bodies of the USSR Gossnab for the delivery of all types of material and technical

resources for the needs of the agro-industrial complex on a priority basis irrespective of previously formed ties.

The priority development of the agro-industrial complex for the 13th Five-Year Plan was determined by the March (1989) Plenum of the CPSU Central Committee. It was considered advisable to allocate capital investments in the volume of 345 billion rubles for APK development in 1991-1995—19 percent more than envisaged in the 12th Five-Year Plan. At the same time, capital investments in the nonproduction sphere of rural areas will increase 1.5-fold, in road construction, 2.8-fold, and for the development of industrial enterprises for the processing of agricultural products, 1.5-fold.

Plans have been made to retool sectors of the agro-industrial complex through deliveries of tractors, trucks, and agricultural machines worth 75 billion rubles, which is 24 percent more than during the 12th Five-Year Plan, including machines for plant growing, 31 percent and for animal husbandry, 29 percent.

Taking into consideration the great national economic significance of the provision of agriculture with modern equipment, appropriate ministries and departments should determine the program for the development and mastering of priority equipment for this sector for the 13th Five-Year Plan. It should envisage the satisfaction of the needs of kolkhozes, sovkhozes, leasing collectives, and peasant farms for the indicated machines. This equipment should be included in the state order and capacities for its production should be developed during the first years of the 13th Five-Year Plan.

Retooling, reconstruction, and expansion of existing and construction of new enterprises in processing sectors of the agro-industrial complex should be carried out on the basis of introduction of advanced technological processes, highly productive flow lines, and complete sets of equipment.

In order to eliminate meat and milk losses, it is necessary to develop in every Union and autonomous republic, kray, and oblast capacities for a prompt acceptance and processing of all livestock products, concentrating attention on the construction of medium- and low-capacity enterprises directly in livestock and poultry raising zones, on a significant expansion of capacities for the output of sour milk products, curds, cheese, and other products in great public demand, and on the establishment of specialized shops for the production of dairy products for babies at dairy plants located in cities.

In the food sectors of industry in all the country's regions it will be necessary to put into operation capacities making it possible to fully meet the population's needs for high-quality confectionery and margarine products, mayonnaise, nonalcoholic beverages, and canned fruits and vegetables, to develop a wide network of enterprises for the output of potato products in the country and to increase their capacities to 571,000 tons by 1995, and to

build shops for the processing of fish into semifinished and finished products in every Union and autonomous republic, kray, and oblast.

In order to meet the needs of processing sectors for technological equipment, plans are made to deliver equipment worth about 37 billion rubles in 1988-1995, which is much more than during the preceding 40 years, and to master the output of highly productive new-generation equipment, basically systems of machines for the entire complex of storage, transportation, and processing of agricultural products with an extensive use of automation equipment, robot engineering devices, and microprocessor and computer hardware.

About 8,000 types of technological equipment will be needed. One-half of them will have to be developed anew. Enterprises and organizations of all national economic sectors, primarily ministries of the machine building complex, defense sectors of industry, and the country's agro-industrial complex, have been enlisted in the solution of this problem.

In 1990-1993 the USSR Ministry of Heavy and Transport Machine Building and the USSR Ministry of the Defense Industry should ensure the output of refrigerating machines, units, and installations in quantities meeting the needs of the agro-industrial complex as early as 1992.

**Ensuring the preservation of fruits and vegetables during their transportation** is one of the most complex problems in the supply of fruits and vegetables for the population. At present the existing pool of specialized transport makes it possible to transport approximately 65 percent of the volumes of perishable agricultural and food products. The needs of the APK for medium-tonnage refrigerated motor transport are met especially poorly (only 20 to 25 percent). Nor does the existing pool of refrigerated and isothermal railroad cars ensure the transportation of perishable freight with the observance of requirements, owing to which part of the products are transported in ordinary railroad cars and are subject to spoilage. This leads to losses of raw materials and products during transportation in the amount of 1.5 to 2 billion rubles.

In order to eliminate such a situation, the program for providing APK processing sectors with transport facilities for 1988-1995 has been developed. It envisages the delivery of 556,000 specialized motor vehicles, including 86,000 refrigerated trucks, 19,000 refrigerated and isothermal railroad cars, and 9,000 thermos tanks for the transportation of juices, milk, and so forth, to the agro-industrial complex in 1988-1995. Plans are made to organize the output of a number of new types of refrigerated equipment—large-tonnage containers with a load-carrying capacity of 20 tons, refrigerated air containers with a load-carrying capacity of 5 tons, small-tonnage refrigerated trucks, detachable specialized bodies, and

other specialized machines. The realization of this program will make it possible to almost fully ensure the planned conveyance of perishable products by specialized transport.

With the accelerated development of the APK material and technical base the scale of application of advanced technologies of agricultural crop cultivation and of overall processing of field and farm products will expand, losses will be reduced significantly, and food resources will increase by 27 to 30 billion rubles by 1995.

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#### Reportage From Saratov Conference

*904B0190B Saratov STEPNEYE PROSTORY in Russian No 1, Jan 90 pp 25-26*

[Report on conference by M. Mullin, special correspondent of STEPNEYE PROSTORY: "To Meet APK Needs With Small-Capacity Shops for the Processing of Agricultural Products"]

[Text] This was the topic of the seminar conference held in the city of Saratov last October. Its participants—representatives of oblasts and autonomous republics in the Volga area, as well as in Belorussia and Azerbaijan—exchanged experience in the planning of processing enterprises and shared their finds in the organization of their work. It turned out that the APK system does not yet have a general and sufficiently substantiated concept of siting processing shops inside a specific oblast or republic. This gap is not as inoffensive as it may seem at first, because planning blindly and siting "at random" are fraught with overexpenditures of funds, which are already deficient, spoilage of raw materials and products, increase in transport expenditures, and intensification of social inequality.

Fifty or sixty years ago some people were afraid "farsightedly" that peasants with their "private property instincts" would cheat the state. Therefore, processing gradually became governmentalized so that it would be easy to control and distribute what was produced. Subsequently, this was expressed in monster mania. If to build a meat combine, then it should be for 30 tons per shift and, if to build an elevator, then it should have a capacity of 1,000 tons.

With the adoption of the law on property the situation will undoubtedly change—processing will be nearer to the place of production of raw materials and the large products list will be shortened. However, for the sector's successful and rapid development there is a shortage of information now. For the absolute majority of planners and, moreover, designers processing shops and their equipment are terra incognita.

In connection with this plans turn out to be insufficiently compact—not from the "right" materials.

It is also bad that the same institute is forced to execute all the types of planning work—there are approximately 40 of them. Hence the quality is not always on the level.

L. K. Spirin, chief engineer of Privolzhagropromprojekt, talked bitterly about an expensive "incident." The shop for carbonic acid production built in Arkadak became the first large project of this institute. At first the order for the technological part was placed with the people of Kharkov and it itself handled the construction.

The project was put into operation. However, being in a serviceable condition, it does not operate now—it has proved to be unnecessary!

People who are not specialists, or officials from oblast agro-industrial complexes—specialists, but with much lower skills than planners—often prepare the draft design of oblast executive committees. Often the document is prepared on the basis of considerations of the moment. Then completely uninformed people approve it. Planners are forced to submit to them, builders build, large funds are invested, and... it turns out that the project either is not necessary, or is not in the proper place, because its capacity is much bigger (smaller) than the region's raw material base can provide.

For the 3d year Saratov, Volgograd, and a number of other oblasts have intensively engaged in putting processing enterprises into operation. Substantial experience is available and a significant potential has been accumulated. During this time the people of Saratov alone have built 42 slaughtering shops with equipment valued at 6,000 to 8,000 rubles and a capacity of five or six head in 24 hours and have put into operation five sausage shops with a productivity of up to 1 ton per shift.

The lack of overall technological solutions in this sphere is one of the main obstacles to the development of "small-scale processing" in the country. Not a single plant produces complete and full flow production lines. For this reason the client is forced to receive equipment in parts: something from Azerbaijan and something from Vladivostok or Kharkov. He has an awful lot of trouble, but cannot put the shop into operation with the planned capacity. As a result, no experienced and even, simply, sufficiently educated manager takes plans based on Soviet-made equipment. Supply organizations, well aware of the situation, do not undertake overall supply for such new construction projects. At the same time, managers are glad to order and buy plans for any money, if the latter provide for a complete overall production line, even if they have to pay for equipment with foreign currency.

Measures to reduce intraeconomic production losses at processing enterprises were discussed at the seminar. The country annually loses 1 million tons of meat products at them. At the same time, every year we buy 900,000 tons of meat abroad—with foreign currency. In the same Saratov Oblast the siting of meat processing enterprises is not linked with the production of raw

materials and with intereconomic ties. Rather it is oriented toward sectorial and departmental interests. Disproportion is allowed and rayons are in an unequal situation. With a total capacity of about 400 tons per shift the oblast center and the city of Engels located nearby account for more than 214 tons. On the other hand, there are unjustifiably few such enterprises in the south-east. At existing enterprises the equipment is worn out and obsolete. As a result, from these rayons livestock has to be transported over big distances, which leads to a loss of weight in animals and, consequently, of output. Against this background it is not even sound to talk about the increase in transport expenditures that has arisen!

In Saratov and other oblasts in the region there are places, where there are no processing enterprises at all. It cannot be that there are no raw materials here. As a result, agricultural products, which are insufficient as it is, are spoiled. But the labor of hundreds and thousands of people has already been invested in their production!

Previously, advocates of concentration substantiated—and even now try to substantiate—their position by the fact that with an increase in the volume of produced products specific expenditures on their production decrease. However, practice shows that even this trump card is beaten. For example, at the Engels Meat Combine expenditures per ruble of commodity output total more than 90 kopecks, which is more than at small enterprises in Rtishchev and Kalininsk.

In capital intensiveness "younger brothers" also seem preferable to the Engels giant. At the latter losses due to unwarranted transportation alone total about 160 rubles per ton of meat. Total losses are vast.

This also applies to other enterprises. For example, it has been noted that large dairy plants often dump out buttermilk and other "waste" in a big volume. Small-scale production can be fully competitive owing to narrower specialization.

The insufficiently developed network of processing shops leads to the fact that in Saratov Oblast alone about 20,000 tons of meat are "simply expended" annually. Food products are not produced from it.

Both practice, including foreign, and calculations show that, when establishing processing enterprises, it is advisable to be oriented toward a division of processing stages. That is, as a minimum, the preliminary processing of raw materials should be carried out in every rayon at primary enterprises and secondary, intensive processing, at more or less centralized enterprises. Owing to this alone, savings on transport in Kalininskiy, Samoylovskiy, and Lysogorskiy rayons will total 3.7 to 4.0 million rubles per season.

The meat turnover time has now increased. However, it is well known that after freezing its nutrients are reduced to one-half as compared with fresh meat. Despite all the

advantages, the step-by-step system is feasible only with a real entry of the meat combine into the APK.

Processing should be developed where a great deal of meat is produced and purchased. Planners have realized this. When defending a plan, not so much attention is paid to an improvement in technology as to its social and economic significance. Localities are also aware of this. Now it is up to oblast authorities. Otherwise, a repetition of the situation that arose with the construction of the above-mentioned carbonic acid shop is possible.

Nor does the argument of "centrists" to the effect that the standard of production and working conditions, allegedly, are known to be higher at large enterprises stand up to criticism. Speakers noted that both depend on labor organization, observance of technology, and the general standard of workers and, especially, managers, not on the size of the shop (enterprise).

At the seminar much attention was paid to the study of the experience of Union republics with, seemingly, quite different climatic conditions. For example, the head of a group from the Yuzhgiproagroprom Institute (city of Baku) familiarized the participants with plans for dry fruit and vegetable shops with an annual productivity of 100 tons of output, which are widely used in Azerbaijan. The point is that the exotic technical solutions of the Baku Institute in the Volga area can be applied for... the drying of parsley, celery, onions, and garlic. Volga cooperatives can also order such plans from Yuzhgiproagroprom. Devices for the use of solar energy for drying can also be borrowed from southerners. In our region there are no fewer sun days than in Apsheron.

The report by the representative of Belagroproyekt (city of Minsk) was noteworthy. Ten shops for sheepskin processing were introduced in the BSSR. At first some specialists doubted the advisability of their pl shops for sheepskin processing were introduced in the BSSR. At first some specialists doubted the advisability of their planning and construction. It would seem that there was not much sheepskin in the comparatively small republic. However, when technological lines were in full operation, it became clear that it was necessary to build, as a minimum, another 10 shops. In Belorussia 30,000 sheepskins are now tanned annually and 5,000 fur articles are sewn. Overall enterprises have begun to be built. Things should be organized so that a kolkhoz member comes, delivers skins, and receives a ready sheepskin coat on the spot. That is, where raw materials are accepted, both a fitting is made and a finished product is handed out.

The initiative of Belorussian specialists creates confidence that new shops will not be idle—Kazakhstan is ready to offer them millions of sheepskins. However, the Volga area is much closer to Kazakhstan than the BSSR! (For business people we will report: The cost of the shop is 379,000 rubles. Every skin gives 8 rubles of profit. Production is well organized in Baranovichi. The plan costs 2,500 rubles. The address of the planning institute: 220050, 32 Myasnikova Street, Minsk).

The same institute makes plans for canned potato shops—also not an unnecessary thing for the Volga area if we take into consideration that with the traditional method of storage in storage facilities the bulk of the "second bread" rots in winter.

However, the plan for processing beekeeping products evoked the greatest interest of the participants in the seminar. For those who want to do business, for managers of kolkhozes, sovkhozes, and cooperatives such a shop, without an exaggeration, is a gold mine. Judge for yourselves: In the opinion of Belorussian specialists, honey (!) represents "kopecks," the negligible part of the value of beekeeping products. Propolis, bee queen's milk, and pollen are the chief things. Despite the fact that part of the equipment for shops has to be bought with foreign currency (Soviet analogs are produced, but do not ensure the required quality of output and, moreover, are unreliable), owners do not come off losers—what they produce is bought "on the spot" by foreign firms. Foreign currency grows manyfold. Shops produce mixtures of beekeeping products with ginseng and ointment, which have strong cosmetic and therapeutic properties.

We will advise those who have decided to build such a shop that for its full load it is necessary to have 5,000 bee families. With appropriate keeping technology one beehive gives 18 kg of pollen per season.

Thought should be given to this.

Lessees and owners of small farms should pay serious attention to planners: Institutes also develop plans for them—sheep pens, fattening hog houses, and so forth.

Summing up what has been said, we will note the most urgent of all the priority matters in "small-scale" processing. Complete production lines are needed. Now, however, enterprises, which have done something in this direction, in connection with the promised conversion no longer produce them and military enterprises do not produce them yet. There is nothing on which to process fruits and berries. Apparently, in the APK system it is necessary to urgently establish a service for the completion and delivery of equipment for processing, or to transfer these functions to the presently quite developed agricultural supply system.

It is also necessary to ask local party and Soviet bodies for an indispensable placement of part of the orders for the manufacture of such equipment with plants of a corresponding oblast or autonomous republic.

Without the solution of these three problems local processing will not go far.

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## MACHINERY, EQUIPMENT

### Severe Metal Shortage Hampers Agricultural Machinery Sector

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[Article by V. Virkunen, SELSKAYA ZHIZN parliamentary correspondent: "Priority With A Minus Sign"]

[Text] Since the beginning of the year not a single completely assembled tractor has come off the production line of the "Minsk Tractor Plant" association. More than two thousand "Belorus" tractors which are direly needed in the fields of our country are standing in open equipment yards without bodies or splash-boards. There is no metal to be had. In the "Gomselmarsh" association the assembly lines are not working either. Shops which produce pins and bolts are standing idle, something which threatens to bring to a standstill the entire association. The reason is that there are no steel rods available. Because of a disruption in deliveries of cold-rolled sheets the manufacture of harvesters and practically all grain harvesting combines has ceased. At other agricultural machine building enterprises the picture is analogous.

These facts were cited at a session of the Supreme Soviet's Agrarian and Food Committee which was held under the chairmanship of A.F. Veprev on 22 February. Ranking officials from the USSR State Planning Committee (Gosplan), the USSR Committee for Material and Technical Supply (Gosnab), the Council Of Ministers' State Commission on Food and Procurements, the Ministry of Automotive and Agricultural Machine Building (Minavtoselmarsh) and heads of a number of agricultural machine building enterprises were invited to the session. The main question on the agenda was carrying out the tasks assigned by the Agrarian Committee on Improving Material-Technical Supply To Rural Areas.

The people's deputies noted that this year supply to rural areas has fallen to an unprecedented low level. In just one and a half months planting begins in the southern part of the country and there is no new equipment, fuel or spare parts at the sites. This information is confirmed by statistical data. Last year out of 27 of the most important items necessary for agricultural production full shipments were made in only five (!) categories. Deliveries in the majority of categories of material and technical resources to rural areas was significantly lower in comparison with 1988.

The situation with equipment is the cause for special criticism from village dwellers. Now the myth that our agriculture is inundated with tractors, that there exists an abundance of tractors, has begun to circulate. That is not so. There are 3-7 times fewer tractors in our country for every 1000 hectares of farmed land than in the industrially developed countries.

Last year alone industry owed agriculture 41,000 tractors, 9,000 trucks and 730 excavators. With a requirement for 400,000 units of various modifications of grain harvesting equipment, rural workers are experiencing a shortage of 130,000. In addition, 800,000 tons of gasoline, 1,900,000 tons of diesel fuel and 300,000 tons of lubricating oil never got to the villages.

Such a situation, said the deputies, is all the more intolerable in light of the government's recent highly publicized announcements from the tribune of the Second Congress of People's Deputies about the priority development of the country's agroindustrial complex.

What has happened? Will the Ministry of Automotive and Agricultural Machine Building be able to provide rural areas with equipment and spare parts? The answer was simple. If everything continues as it is now, then it will not be able to. The reason is that there is no metal. Take practically any plant in that branch of industry; at each one there is a feverish scrambling to supply metal products: there are no pipes, sheets, rolls of this or that type of metal...Plants now stand idle not just hours but days, shifts and sometimes even weeks. Directors of agricultural machine building plants unanimously confirm that in their memory nothing of the kind has ever been seen before.

Chairman of the Subcommittee on Agricultural Machine Building Deputy A.T. Kuzovlev announced that in determining the needs of the rural areas, Gosplan has based its considerations on everything except elementary reason and has shown a complete lack of responsibility. It is characteristic that namely this lack of responsibility for its decisions has begun to determine the current style of work of this particular government institution.

The most vivid example of this was noted in the speeches. This is the so-called "percent of savings" of resources which is approved in a directive by Gosplan itself and carried out again by Gosplan at the planning stage. Upon closer examination this "savings" turns out to be a simple numbers game and nothing more.

Gosplan apparently chooses a certain amount of metal, cement, lumber, pipes but then immediately reduces the amount to be delivered. That is the same as, let's say, showing a customer a loaf of bread in the bakery and then immediately cutting a fourth off and considering that a savings.

This "percent of savings" by the most conservative estimates lowers the level of resources supplied to the agricultural machine building industry by a million tons of rolled metal. But this forced "savings" is not the most serious problem in this branch of industry. So-called "free affiliation," or the very first step towards a free market, is far more serious. Plant producing agricultural equipment lost more than a million more tons of metal this way.

Attempts to sign direct contracts between agricultural machine builders and metallurgical enterprises even

under pressure from Gossnab have not met with success. For the monopolists producing "industrial grain" this client is obviously not a profitable one. What can you get from him? During the committee session this fact was presented: in exchange for 5,000 tons of aluminum the extortion-minded metallurgists demanded 9,000 automobiles from the Volga Automobile Plant.

This kind of industrial racket has become a fact of life. Metallurgical plants are persistent in demanding from their clients sausage, wood products, plumbing equipment and freely convertible currency in exchange for metal. The "Minsk Tractor Plant" association in Zaporozye was able to exchange 7 tractors for 7 train cars of sheet metal but only with tremendous difficulty. From a collective of the Kirovograd "Chervona Zirka" factory they wanted 7,000 rubles from the material incentive fund for each boxcar of metal. The speakers gave the figure of 4,000,000 tons of rolled metal. How much metal was simply "lost?" It was supposed to have been produced, but it no longer exists. A huge amount of metal goes abroad.

The alluring prospect of wholesale commerce for the time being is running multimillion ruble losses on a national economic scale, noted the deputies. Gosplan approached it with a certain degree of risk. And with reason: even 95 percent of the state order for metal production resulted in a stoppage at the agricultural machine building enterprises. It was supposed that the market would lower the above-normal reserves of commodities and materials at the enterprises. Actually they have grown even more. A market is needed for all types of conditions. But how do you construct it? Should we start it with metal? Maybe, try to begin with the finished product? These aren't questions for a parliament but for professionals, of whom, unfortunately, there are very few in the respected and reputable agencies of Gosplan and Gossnab.

The thesis presented here is confirmed by the fact that the possible consequences of a hasty conversion to wholesale commerce were not studied. For that reason today we are faced with a dilemma: either to continue

the further disintegration of agricultural machine building or to pluck up our courage and recognize the error of the method chosen for the transfer to market relations. It was noted in committee that although it may be a reactionary idea, the agricultural sector must be supplied 100 percent by state orders. And it is necessary to complete the affiliation of agricultural machine building with metallurgy without capriciousness, resentment and demagogic. It is terrible to write, but if that doesn't happen, there simply won't be anything to harvest from the fields this fall.

The sectors of the agricultural machine building industry carry no less blame for the material and technical supply of the agricultural industrial complex. There is a shortage of metal in the country. But despite this how many unnecessary, huge, nonproductive and extremely expensive machines are produced! But there is no one individual who bears personal responsibility for the absence of promising machines and an overall concept of agricultural machine building. Who is supposed to work on the future of the industry if not the Council of Ministers' Commission on Food and Procurements?

At the committee session, facts were presented about instances when design bureaus carry out functions for which they were not intended. For example, the Taganrog design bureau (KB), leader in the design of grain harvesting combines, assembles transmission boxes and final drives for "Rostselmash."

The Supreme Soviet's Agrarian and Food Committee stated that the old, mistaken approach to solving problems of paramount importance can be found in the work of the departments. Gosplan, Gossnab and the Council of Minister's Commission on Food and Procurements have demonstrated their complete helplessness and extreme irresponsibility in this matter. Like five and ten years ago officials of these reputable institutions who have been entrusted with authority continue simply to inform the people's deputies about the current situation and to wait for instructions. But is it the business of the Supreme Soviet to replace executive authority? The question arises among the deputies as to whether the executives possess sufficient competency.

## POLICY, ORGANIZATION

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### Rise in Unfinished Construction Linked to Contracting Procedures

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in Russian No 4, Apr 90 pp 3-13

[Article by R. V. Molotkov, deputy chief of the contract operations department, USSR Gosplan: "The Reference Point is End Results"]

[Text] USSR Council of Ministers Decree No 809 of 30 September 1989 entitled "On Certain Measures to Improve the State of Affairs in Capital Construction" entered into force as of the beginning of this year. In fulfillment of this decree, USSR Gosplan, USSR Gostroy, USSR Ministry of Finance, State Committee for Labor and Social Problems, State Committee for Statistics, USSR banks and other central economic organs have developed, approved and sent down to the executors (ispolnitel) a whole package of normative-methodological materials on the implementation of the provisions of this decree. With the participation of the developers of the normative-methodological materials, USSR Gosstroy held 5 zonal conference-seminars in November 1989 to explain these provisions and materials. These meetings involved practically all the economic planning services of the overwhelming majority of the construction-installation organizations.

This decree has been interpreted in different ways by the workers of the various construction-installation organizations, client enterprises, ministries, departments and economic organs of the union republics. This is natural, for the basic content of the document is directed to a substantial increase in the demands made on the participants in the investment process. A number of its provisions require strict observance of normative construction time periods and an increase in the severity of property liability for "lengthy construction;" others set rather serious obstacles to the excessive expansion of the construction front. The requirements for the effectiveness of capital investments have been raised and the need to discontinue the construction of projects based on obsolete designs has been recognized.

If one looks at all these measures in their totality, one can say unequivocally that they are directed to accelerating the achievement of the final goal of the investment process—the commissioning of production capacities and non-production purpose projects.

Unfortunately, despite the measures previously adopted, the question of the acceleration of construction in the current five-year plan not only was not resolved but was exacerbated even more to a considerable extent.

Statistical data indicates that in the years 1986-1989 the commissioning of capital (fondy) and production capacities was, as before, extremely unsatisfactory and the

construction of housing and social purpose projects was carried out at inadequate rates. Unfinished construction and its above-norm amounts continued to grow. Moreover, tendencies toward a drop not only of the rates but also of the absolute amounts of construction have been clearly observed during the last 4 years.

The plan fulfillment results in 1989 were especially unsatisfactory. According to USSR State Committee for Statistics data, not only were the negative tendencies in capital construction that occurred in past years not checked, but with respect to a number of indicators the sector was found to be in even worse shape. A marked decline in the commissioning of social sphere projects has taken place. The commissioning of total housing space through state centralized capital investment and enterprise funds came to only 96% of planned targets in 1989; during the past year 3.8 million square meters less housing was commissioned than in 1988. Construction of housing in the individual sector and in house-building cooperatives was 2.7 million square meters less than planned. All told more than 100,000 families were not settled into new apartments. The smoothness of the commissioning of housing throughout the year got significantly worse. The plan for the commissioning of schools was fulfilled by only 85% and the plan for children's pre-school institutions—by 74%.

Of the 552 most important production capacities accounted for by the USSR State Committee for Statistics which it was planned to commission in 1989, in fact, only 278, or 50.4%, were commissioned. At the same time, fulfillment of the plan with respect to this indicator in the machine-building complex which, based on its function, ought to determine scientific and technical progress in the economy, came to only 61%. Analysis of the plan for commissioning of production capacities in 1989 indicates that, as before, about 90% were to be commissioned in the fourth quarter; linkage of this plan with equipment delivery plans was lacking.

As a result of the unsatisfactory fulfillment of the priority projects program (puskovaya programma) the commissioning of fixed capital per 1 ruble of capital investments amounted to only 86 kopecks in 1989 as compared with 91 kopecks on the average during the preceding three years of the five-year plan. The volume of unfinished construction being carried out through state capital investments alone amounted to 180.9 billion rubles at the end of 1989, including 39 billion rubles of above-norm construction whereas at the end of 1988 these volumes came to 158.3 billion rubles and 18.7 billion rubles respectively. An especially intolerable situation with unfinished construction has developed in the production sectors. Its above-norm volume grew by more than four times in 1989 in comparison with 1986 (from 6.7 billion rubles at the end of 1986 to 27.5 billion rubles at the end of 1989).

Despite such a, to be frank, failure of the priority projects program, the gross volumes of contract operations were fulfilled practically at the plan level while the

profit plan was overfulfilled by more than 10% by construction-installation organizations. The average wage in construction has increased by 28% during the last 4 years, including by 9% in 1989.

It is obvious that the situation which has developed cannot be considered normal.

The article's author is far from thinking that the imperfection of the economic mechanism is the only reason for the ever continuing deterioration of the situation in construction. Very serious shortcomings in material-technical supply, failures to meet the deadlines for the manufacture and delivery of equipment to construction sites, an outburst of the investment activity of the clients after the conversion of enterprises and organizations to the new management conditions, the presence of many weak spots in construction production itself, including the lag in the level of development of the production base and the excessive specialization of contract organizations, the monopoly position of the builders—all this taken together does not permit capital construction to get out of the state of crisis in which it has found itself.

At the same time, analysis of the dynamics of the change in the volumes of above-norm unfinished construction over a number of years indicates that it is closely related to the mechanism for the settlements of contract organizations for work performed. The less the settlements procedure is oriented to the end result—the commissioning of production capacities and projects—the more rapidly the construction front expands and above-norm unfinished construction grows. Thus, after the conversion of capital construction to settlements for stages in 1969, i.e., after enlargement of the subject of settlement, the volumes of unfinished construction began to decline. After the further enlargement of the subject of settlements and the conversion in 1981-1985 to settlements for commodity construction output (*tovarnaya stroitel'naya produktsiya*), which represents the estimated value of the enterprises handed over to the client ready for the production of output and the rendering of services, their phases, priority (*puskovoy*) complexes and projects, the volumes of unfinished construction declined from 27.7 billion rubles in 1980 to 10.2 billion rubles in 1985. Moreover, with respect to production purpose projects, where the influence of the settlements procedure for work performed on the results of the economic activity of the builders is the most significant, the volumes of above-norm unfinished construction declined during this period from 17.6 billion rubles to 4 billion rubles, i.e., by a factor of 4.4, and reached the minimum rate for the period since 1965.

A contrary process began after 1986 when, in accordance with certain decisions, the subdivision of the subject of settlements was effected and the conversion to settlements for technological complexes and, essentially, for the gross volumes of operations (*valovyye obyemy rabot*) carried out. During the last 4 years alone the volume of above-norm unfinished construction has increased almost 4 times.

These data indicate, in particular, that the habit of many managers of attributing the failures in capital construction to material-technical supply shortcomings alone is incorrect.

The economic mechanism governing the activity of the contractor in many respects predetermines the end results for capital construction as a whole. Its orientation towards commissioning production capacities and projects as rapidly as possible ought to be the basic core of all investment policy and construction in normative time periods the main way of increasing the efficiency of construction production. USSR Council of Ministers Decree No 809 of 30 September 1989 orientates participants in the investment process precisely to this.

One of the most important measures specified in the decree is the conversion, beginning in 1990, in construction to settlements and the formation of revenues (profit) and the economic incentive fund after the commissioning of enterprises, their phases and projects—for finished construction output (*gotovaya stroitelnaya produktsiya*).

In accordance with this provision USSR Gosplan and USSR Gosstroy have prepared and approved instructions concerning the composition of finished construction output. These instructions stipulated that enterprises, their phases and projects accepted for operation in accordance with established procedure whose construction is completed and which are ready for the production of output and the rendering of services are finished construction output for contract construction organizations. At the same time, taking into consideration the fact that in many cases not phases but priority complexes ready for the production of output or the rendering of services being accepted by a client in accordance with established procedure are singled out in project cost estimate documentation (*proyektno-smetnaya dokumentatsiya*) for the construction of enterprises (structures), as well as in title lists with construction time periods greater than 1 year, USSR Gosplan and USSR Gosstroy have decided to also include such priority complexes in finished construction output.

Finished construction output, while in many respects similar to the indicator of commodity construction output used in 1981-1985, has at the same time a number of important differences.

The make-up of the newly introduced indicator, "finished construction output," is strictly limited to four categories of construction projects. These are enterprises, their phases, priority complexes and projects accepted for operation in accordance with established procedure. Moreover, a single condition is to be satisfied for all: they should be ready for the production of output or the rendering of services. Any other construction project or complex of construction operations, the carrying out of which does not result in the potentiality of producing output for the national economy or of rendering services, is not finished construction output,

despite the fact that in a number of instances with respect to them settlements for work performed have been authorized.

The question arises in this connection: are complexes of subcontract operations finished construction output? The answer is clear: no, they are not.

One should bear in mind that, unlike commodity construction output, finished construction output includes only those projects which are being built on the basis of separately developed project cost estimate documentation and have an independent title list. Projects included in the project cost estimate documentation of a single construction site but not having a separate title list (for example, an administration building, a fire station, a boiler house and other projects of a similar type erected during the construction of enterprises) are not included in finished construction output. With respect to such projects, settlements for work performed can be made and revenue (profit) and economic incentive funds formed, however on condition that the length of building the site as a whole is greater than 1 year.

In a number of sectors, for example in electric power engineering, the coal industry and others which have lengthy time periods for the construction of enterprises as a whole, the establishment of the new settlements procedure can negatively affect the economic activity of the construction organizations building such enterprises. In order to eliminate these negative consequences in individual cases, when the length of the construction of priority complexes is greater than 2 years, USSR Gosstroy can authorize the carrying out of settlements for individual buildings and structures whose construction has been completed. However, one should bear in mind that these authorizations will be given by USSR Gosstroy (or in accordance with a procedure which it has established) at the stage of the development of the project cost estimate documentation and not at the settlements stage.

A fundamental difference between finished construction output and commodity construction output is the fact that it originates with respect to production purpose projects not after the signing but only after the approval of the certificate of the state acceptance commission. This measure is directed towards reducing the amount of construction defects at projects being turned over and at increasing the liability of the contractor for the quality of the construction.

An important difference between finished construction output and commodity construction output is the fact that its volume is determined in accordance with the contract price stipulated in the contract agreement. This means that it includes not only the estimated cost of the construction and installation work for an individual enterprise, its stages, priority complex or project, but also other costs attributable to the activity of the contractor and accounted for in the contract price in accordance with established procedure.

An extremely important difference occurs also in the procedure for approving the plan with respect to the types of construction output under examination: whereas the plan for commodity construction output was approved for the contract construction organization "from above," the volumes of finished construction output are established and approved by the contract construction organization independently.

Let us dwell in greater detail on the procedure for forming the plan for finished construction production. Under the USSR Law on the State Enterprise (Association), the plan for finished construction is composed, as it were, of three parts.

The construction sites at which production capacities are being created on the basis of a state order are the first part. Decisions with respect to the volumes and time periods for the commissioning of production capacities at such construction sites and with respect to the the volumes of contract operations at them are made by the USSR Council of Ministers or by USSR Gosplan and are obligatory for the contract construction organizations and the client organizations when contract agreements are concluded. These decisions are sent down to the contract construction organizations in the form of a list of specific state order construction sites. The volume of finished construction output for such sites is determined in accordance with the contract price and is accounted for in the plan on the basis of the time periods for the commissioning of production capacities established by the USSR Council of Ministers in the list of construction sites.

The volumes of this output with respect to social sphere projects are the second component of the finished construction output plan for a construction organization. According to present procedure the Councils of Ministers of the union republics, together with the client USSR ministries and departments whose enterprises are located in a republic, develop in coordination with the ministries and departments carrying out construction and installation operations and approve consolidated plans for commissioning housing and social purpose projects with the assignment of a state order. The targets of the indicated consolidated plans, including the state order, are sent down by the client USSR ministries and departments and by the contractors to subordinate enterprises and organizations and are also obligatory for them.

Finally, the third component of the finished construction output plan is developed by the contract construction organizations independently on the basis of contract agreements concluded with the clients. The time periods for establishing the finished construction output for such projects are determined in accordance with the time periods for the commissioning of the production capacities stipulated in the contract agreements on the basis of normative construction time periods. This third part of the finished construction output plan also defines the

degree of freedom of the contract construction organization and none of the higher organs and local leadership have the right to infringe upon it.

For the national economy as a whole, the relative share of the volumes of work at construction sites at which production capacities are being created on the basis of a state order amounts to about 10% of the total volume of contract operations; for social sphere construction sites, the state order for which is prescribed by the union republic councils of ministers—50-55%, while for construction sites whose plans are established by the contractors independently on the basis of contract agreement without targets “from above”—35-40%. Undoubtedly, this ratio can be different for each specific construction organization, but basically the contract construction organizations have rather broad possibilities for independent organization of the work program.

The indicator of finished construction output covers only priority construction sites. In addition to that, a contract organization, simultaneously with working on priority projects, works on incomplete and extendable capital construction projects (zadel), does work on the basis of subcontracting agreements at other construction sites, and carries out capital repair.

The volumes of these operations are not included in the volume of finished construction output, but should be reflected in the calculation when producing the indicators of the activity of a construction organization. With this aim in view, the indicator “total volume of finished construction output and operations (obshchiy obyem gotovoy stroitelnoy produktsii i rabot),” the fulfillment of which by one's own resources also is the basis for planning and computations of revenue (profit), for determination of savings in unfinished construction and installation operations, and for the economic incentive funds and planned costs envisaged in the estimates of the expenditures of the assets of the funds for the development of production, science and technology and for social development, has been introduced.

The outlays of the construction organizations themselves prior to the turning over of finished construction output to the client are covered through the internal resources of the organizations and bank credits issued on the basis of the estimated cost of construction and installation operations, taking other costs of the contractor included in the contract price into account. Taking this into consideration, a decision was also made about monthly payments to the state budget by the contractor.

Payment for the use of credit within the limits of the stipulated normative construction time period is set at the rate of 0.5% annually and in accordance with the procedure established by USSR Gosstroy and USSR Gosplan is included in the estimates of the construction sites, i.e., it is not reflected in its economic activity if the contractor adheres to this time period.

One needs to dwell especially on the organization and utilization of the material incentive funds and the unified wage fund when converting to the new form of settlements for work performed. According to the instructions with respect to this question approved by USSR Gosplan, the USSR State Committee for Labor and Social Problems and USSR Gosbank, the material incentive fund is formed and utilized only after finished construction output is turned over. Part of the unified wage fund, earmarked for the payment of bonuses and rewards based on the year's results and for incentives and determined in accordance with established procedure from the growth of savings in unfinished construction production, is also reserved and utilized only after finished construction output is handed over.

This approach provoked especially sharp criticism on the part of the workers of construction-installation organizations when the zonal conference-seminars referred to above were held. The manager of one of the large trusts of Kazakh SSR Gosstroy noted that the requirement concerning the reserving of the material incentive fund and part of the unified wage fund and the granting of the right to use this reserve only after finished construction output has been turned over, figuratively speaking, is equivalent to a man who has come to the dining-room to eat a fixed price dinner and first proposes to eat only the first and second dishes and to have the third (the compote) only some time later.

It is apparent that this comparison needs to be interpreted another way: if the person has come to the dining-room to eat a fixed price dinner he should first pay the full cost of the dinner to the cashier and then eat both the first and the second and the third dishes. As applied to the builders this means: if the construction organization has come to a construction area to build a project it first should perform all the work and only receive bonuses from the material incentive fund for the commissioning (i.e., eat the compote also) after this. Many builders do not want to agree with this. They give as a reason the fact that the workers will lose up to 30% of their wages.

In order to get a more precise fix on this question, let's examine how payments to the workers of construction organizations are distributed on the basis of their sources. Data on this for 1988 for construction as a whole are given in Table 1.

Table 1

	Workers	Engineering-Technical Personnel and Employees
Average monthly wage, rubles	265.5	296.3
Including payments from the material incentive fund, rubles	8.5	36.5
Relative share of payments from the material incentive fund in average monthly wages, %	3.2	12.3

Roughly similar values for the relative share of payments to workers from the material incentive fund occur in the organizations of the Kazakh SSR Gosstroy, the Novosibirsk territorial construction association (TCA) and the construction organizations of other cities. A similar analysis was performed on the basis of their data.

These data indicate that the influence of payments from the material incentive fund on the total wages of workers is very insignificant. These payments exert a far greater influence on the wages of engineering-technical personnel and employees. Evidently, it is also the reason for their rejection of the established labor payment procedure in settlements for finished construction output.

What additional limitations arise for the builders in connection with the introduction of settlements for finished construction output? Essentially there are three:

loss of the right to use the material incentive fund and part of the unified wage fund prior to the turning over of finished construction output;

loss of the right to advance payment of bonuses for commissioning;

levy of an increased payment for credit in case the normative construction time periods are exceeded.

The basic objection of the opponents of the introduction of settlements for finished construction output is that the time for the payment for work performed, and consequently for the formation and utilization of revenue (profit) and economic incentive funds, is considerably removed from the start of construction. Examples of the construction of large nuclear electric power stations, metallurgical complexes and other projects with a normative duration of 4-5 years are advanced as arguments.

However, let's look at the structure of the contract operations plan and try to estimate the share of such construction sites in the total volume of operations. Thus, based on the indicators of the 1989 plan, distribution of the total volumes of operations by construction types and time periods is characterized by the data given in Table 2.

Table 2

	National economy (bill. rubles)	Novosibirsk TCA (mill. rubles)	Irkutsk TCA (mill. rubles)	Lenstroy committee (mill. rubles)
Volume of contract work—total	110	282	286	1624
Including:				
a) capital repair	22	4	5	85
b) subcontract	8	15	3	91
c) capital construction (general and direct agreements)—total	80	267	278	1448
Including:				
nonproduction construction	41	168	178	923
production construction—total	39	99	100	525
Including:				
agricultural projects	11	13	12	71
projects of other branches	28	86	88	454
of them with a normative length of construction:				
up to 1 year	14	43	44	227
more than 1 year	14	43	44	227
Relative share of work volumes for projects of other branches of production construction in the total volume, %	13	16	16	14

## CONSTRUCTION

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The volumes of work with respect to capital repair, subcontracting agreements and nonproduction and agricultural construction cited in the table are made up basically of operations being carried out for the erection of complexes and projects with a normative length of construction of not more than 1 year. Approximately half of the remaining volumes of production construction is also carried out on projects with a normative length of construction of not more than 1 year. It follows from this and from the data cited in Table 2 that 87% of the entire program of contact operations is performed in erecting complexes and projects with a normative length of construction of not more than 1 year and only 13% at construction sites with a greater duration.

One conclusion suggests itself: since for the overwhelming majority of complexes and projects the normative time periods for the duration of construction do not exceed 1 year, the introduction of settlements for finished construction output when construction time periods are achieved and the commissioning of complexes and projects is spread evenly throughout the year will not exert a negative influence on the results of the economic activity of a construction organization and the level of wages for its workers.

All the troubles begin when normative construction time periods are not met and the turning over of finished construction output is uneven. The new economic mechanism is also directed to the eradication of these shortcomings in the work of the builders.

As far as the remaining 13% of work volumes for construction sites with protracted normative construction time periods is concerned, there really is a problem here. With a view towards solving this problem, as has already been noted, USSR Gosstroy was granted the right to authorize for such construction sites settlements for buildings and structures whose construction has been completed and construction organizations develop revenue (profit) and economic incentive funds after their construction is completed.

Other measures for improving the capital construction situation envisaged by USSR Council of Ministers Decree No 809 of 30 September 1989 include an increase in the severity of penal sanctions for exceeding normative construction time periods and for developing above-norm volumes of unfinished construction and a payment for unfinished construction when the deadlines for commissioning projects stipulated in the contract agreements are not met. Moreover, the indicated sanctions are applied both to the client and to the contractor and the contract agreements should stipulate the conditions for compensation by the guilty party of losses connected with payments with respect to the indicated sanctions, including the amounts paid on the increased interest on bank loans when construction deadlines are not met.

I would like to emphasize once more that all these sanctions operate only when normative construction

time periods are not met or contract obligations are not fulfilled. If a contract construction organization meets these conditions, it has nothing to fear. Those organizations which are in the habit of starting a large number of projects and not bringing anything up to start-up readiness in time will find it considerably more difficult to manage.

Unfortunately, there are still organizations which are not in a hurry to restructure their activity to orientate it to the end result. The existing system, which permits them to live comfortably while not creating finished construction output, fully suits them. For example, Mosstroykomitet (Moscow Construction Committee) and the Omsk builders have expressed disagreement with the provisions of the USSR Council of Ministers decree. It is obvious that when the country is resolving the problem of making the economy healthy one cannot call such a position correct.

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#### **Improving Construction Via New Economic Mechanism**

904C0006A Moscow EKONOMIKA I ZHIZN in Russian No 9, Feb 90 p 9

[Interview with Rudolf Viktorovich Molotkov, deputy chief of the contracting operations section of USSR Gosplan, by Ye. Babak: "Build First, Then Pay";]

**[Text] Construction organizations have been working under the new management mechanism since 1 January 1990. Its basic elements: settlements with contractors after turnover of facilities for operation; a stiffening of economic penalties for failing to meet construction deadlines; the turnkey erection of housing and other facilities of the social sphere; and the granting of interest-charged credit to contracting organizations prior to turnover of the facility to the client.**

**Can the new mechanism increase construction efficiency? This was the topic of an interview by the EKONOMIKA I ZHIZN correspondent with R. Molotkov, deputy chief of the contracting operations section of USSR Gosplan, who participated in development of the new mechanism.**

"I consider the stiffening of economic sanctions to be the most effective measures," said Rudolf Viktorovich, "in relation to both the contractors and the clients."

**[Question] But in recent years similar penalties have already been used against both partners, both of them considering this procedure too rigid and unjust. A letter has come to our weekly's editorial board in which both the builders and the clients ask for a judgment: which is the more guilty in a failure to meet construction deadlines. And the fines for late introduction of facilities have**

been exacted monthly. And so each month above-standard unfinished construction has grown, which, as is well known, broke all records in the nation's history last year.

The amounts of the fines have now been reduced: only 0.5 percent of the cost of the construction and installing work and of the equipment will be exacted instead of 3 percent. Do you call this stiffening?

[Molotkov] There is a difference. Previously the fine was exacted one time. If the trust missed the deadline for introduction, it settled with the budget—and it could prolong construction even to the end of the century. Now the fine must be paid for each month of failure to meet the deadlines for introduction into operation until the project is completed. And the longer it continues, the greater the penalty, since its size (0.5 percent) is determined by the total cost of the construction and installing work for the contractor or cost of the fixed capital for the client. Payments are made from profit and they reduce the economically self-sufficient income of the organization or client enterprise.

The fine is imposed on construction projects that are being built with either state funds or enterprise funds.

[Question] And what for? If a labor collective has not found a more worthy use for its money than to bury it uselessly in the ground, it has already punished itself.

[Molotkov] Yes, but in so doing it has tied up materials that are in short supply and could have been put to good use somewhere else, and it has diverted the contractors' efforts. Therefore, enterprises which are doing construction work with their own funds should, if they fail to meet the deadlines for turning over new capacity, pay a fine in the amount of 6 percent of the amount of the uncompleted construction, until the work is fully completed.

For the first time, payment of the ministries for the "nezavershenka" [unfinished construction work] has been introduced—that same 6 percent of its amount above the norm for the branch. Regardless of whose money is being used for the construction—the state or the ministry.

I am in general a proponent of such a measure as a tax for construction. In other words, payments for the use of construction resources. Truly, it is in the interests of the economy to use resources in such a way that they justify themselves as quickly as possible. A tax on construction (it exists in some countries) could, I think, promote a reduction in the number of construction projects. This problem was debated during development of the new economic mechanism but still has not been resolved.

The opinion is now being gradually formed in central economic organs that penalties for nonfulfillment of a state order must be stiffened. With the conversion to economic self-sufficiency, the work volume being performed through noncentralized capital investment is

being overfulfilled. By about 1 billion rubles in 1989. While work done with centralized funds is being underfulfilled by 5 billion. Incidentally, that is how it was during the 1965 reform. Usually, the enterprises ask the trust to build something in exchange for scarce services or materials.

[Question] So many idols were smashed in the disputes about the procedure for settlements! The most varied options were proposed. Why did the "finished product" win?

[Molotkov] I personally consider that in the future the partners themselves will be able to negotiate about the way in which they are to settle up—whether after the conclusion of construction, or monthly. The mandatory indicator of the finished product is taken from the arsenal of extraordinary measures adopted for the whole economy.

In various years we have had different indicators—for the gross amount, the stages of operations, the technological complexes, and commodity output. The smaller the facility for which a settlement is being made, the greater the increase of above-standard unfinished construction. Where it was the commodity-output indicator, it was still reduced. But the new indicator is still more rigid—the builders' funds for material incentives, for production development, and for social development will be formed only after turnover of the facilities. We abolished advance bonuses for the introduction of facilities.

[Question] However, let us recall how the various contracting organizations got accustomed to that same strict procedure of settlements for commodity output. Under its guise they began to mold various members—doors, windows and ceilings. The example is, of course, exaggerated, but that is the essence of it. Everything was in order with the indicators, but the facility was turned into a "dolgostroy" [long-lasting construction project].

[Molotkov] Minenergo [Ministry of Power and Electrification] and USSR Minugleprom [Ministry of the Coal Industry] have already appealed to us. They ask us to split large facilities into smaller ones so that they can be counted as finished output. It was agreed that, at large construction projects that are being erected over five or more years, settlements actually and logically are accomplished for the various facilities. But such intermediate facilities will not be considered as finished output, since the whole construction project has not been completed, with all the consequences that ensue for the contractors.

[Question] What aim were you pursuing in converting the builders to a credit basis, interest-charging at that? For the bank receives the money from the client and then hands it out to the builders. Would it not be simpler for the client to settle directly with the contractor?

[Molotkov] The trouble is that, under the current situation, when the partners usually are guilty in different degrees for construction delays, they easily forgive each

other's sins. Yes, the construction-trust contractor squanders the funds of his client—the plant. But the plant also has not sent the equipment on time, and that is why the partner overlooks things. These days, after conclusion of the contract, the client and the contractor "are divorced" financially, and then most likely meet each other only at the turnover of the facility.

To make up for it, the role of the banks is being increased sharply. Their mission is to provide continuous credit to the builders. It is no secret that some enterprises start a construction project without considering their monetary potential. The banks, when opening up financing, must verify the client's solvency, and, possibly, require the minister's guarantees for payment for the construction. And if the client is not able to pay for the builders' work, it will require him to take mandatory credit at a higher rate. Indeed, who begins to build his own house or country cottage without knowing whether he has enough funds for it?

Builders get credit in the amount of the budget-estimated cost and for other expenditures. If the facility is not introduced on time, they pay 3 percent for the credit, not 0.5 percent.

[Question] The builders themselves have greeted the innovations, to put it mildly, without enthusiasm. They are disturbed that during the whole construction period they will not be able to form funds for economic incentives or pay bonuses, and the workers' pay is reduced.

[Molotkov] At the end of last year five regional conferences of builders were held. I attended all of them, and everywhere there were similar expressions.

At Alma-Ata the manager of the Chimkentpromstroy [Chimkent Industrial Construction Trust] went over the innovations venomously. And he got understanding in the hall. At Novosibirsk an economist of the Kamchatka Regional Construction Association (unfortunately, I do not recall her family name), spoke about this same thing. She began to speak with the announcement: "It will put an end to the lease, under these conditions it will be impossible." The economist could not be convinced at the meeting. Soon she came to Moscow. I prepared for a long dispute. But she said: "We in the association have

considered everything. The new terms will in no way prevent either leasing or hinder the builders' work at all."

Our opponents forget that the standard construction time is put at the head of the list. About 80 percent of contracting work is done at facilities where it does not last more than a year. We add, the builders are working not at one facility but at several all at once. If they are turned over gradually, then the contractors will not feel any hole in their budget. Another matter is the fact that we have become accustomed to building 3-fold to 4-fold longer than agreed upon and to presenting the facility for turnover in the last days of December. But the measures adopted also have been aimed at reducing construction time and improving construction's regularity.

Having been in operation the past three years, the mechanism, which pleased the builders so much, had extremely fundamental deficiencies: it considered common economic interests poorly. Here are the 1989 results. Profit for the construction complex was 110.4 percent of that expected. But then only half of the most important production capacity called for by the national economic plan was introduced. The housing program was fulfilled 96 percent, the school-building program 85 percent, and preschooler institutions 55 percent.

[Question] But nevertheless we say that 20 percent of the construction and installing work is at facilities with long construction periods, where numerous and complicated equipment is needed. What kind of an organization is it that does construction only on large industrial enterprises?

[Molotkov] We are talking here about only one-tenth of the trusts, the procedure for settlements at each facility with a standard construction time more than two years is determined individually by USSR Gosstroy.

Everywhere the problem of wages has been discussed especially sharply. Some have calculated that blue-collar workers will lose up to 30 percent in earnings—because of change in the bonus-awarding procedure. However, the statistical data says something entirely different. The share of bonuses for timely startup of a facility in worker earnings is 3 percent, for engineers and technicians more than 12 percent. And this is completely natural. It is upon the latter that the organization of work depends. It is not worthwhile to hide behind average figures.

## POLICY, ORGANIZATION

### US Academic's Proposal on Western Credits Critiqued

904D0056A Moscow TRUD in Russian 4 Feb 90 p 2

[Interview with Doctor of Economic Sciences A. V. Orlov, deputy chairman of the State Commission on Economic Reform of the USSR Council of Ministers, by V. Golovachev, political commentator of TRUD: "How To Fill Counters"]

[Text] Alexander Yanov, professor at New York University, gave lectures on the topic "The West and Perestroika in the USSR" in Moscow. The views concerning improvement in the Soviet economy expressed by him have added fuel to the fire of the heated disputes among our specialists. In brief, the essence of the proposals boils down to a saturation of the consumer market at the expense of credits taken from the West. In the professor's opinion, 25 billion dollars will be needed and they will add goods worth 400 billion rubles to our consumer market. In this way it will be possible to liquidate the "hot" money (unmet demand) and to fill the empty shelves of stores. This proposal is not new. It was widely discussed both by deputies of the USSR Supreme Soviet and in the press. Some support this idea, while others believe that such a path leads to a disaster, when the currency debt exceeds the country's abilities to return it.

However, there is still great interest in this problem and, therefore, I would like to continue this discussion. Here, in brief, are Prof A. Yanov's arguments.

"The Soviet Union is fabulously rich in natural resources. It has gigantic reserves for a black day—in case of a crisis or a war. What are Soviet investments in Western banks? A total of 15 billion dollars. Plus 4 billion in nonbank investments. Plus a gold reserve reaching 32 billion dollars. Plus so-called strategic reserves. It is said that big strategic reserves of raw materials, including copper in a large quantity, are stored underground.

"Under these conditions the mobilization of the sum necessary for a full saturation of the Soviet consumer market with Western goods would present no difficulties. An atmosphere of calm well-being would make a sharp breakdown of the existing economic order or, more accurately, disorder comparatively painless.

"In other words, a few years of consumer paradise would enable the USSR not only to join the world economic system, but also to get ready for the new economic market, like Brazil is now doing in front of our eyes. Although its foreign debt twice exceeds the Soviet debt, Brazil has not only not fallen into the bondage of transnational corporations, but literally is bursting into the ranks of first-class industrial world powers..."

We asked Doctor of Economic Sciences A. V. Orlov, deputy chairman of the State Commission on Economic Reform of the USSR Council of Ministers, to comment on this point of view.

[Correspondent] What is your attitude toward the idea of additional credits in the amount of 25 billion dollars, which evokes so many disputes?

[Orlov] Let us come to an understanding right away: I will express only my personal opinion. That is, I now speak simply as an economist, on my behalf, not on the commission's behalf.

Now about the essence of the problem. The official point of view of this matter is known: It is inadmissible to increase the currency debt considerably. This will mean financial servitude. These apprehensions are very serious. Comparatively not long ago I was also of such an opinion. Today, however, the situation has changed sharply. Empty stores, the aggravation of the shortage, and the scope of the shady economy give rise to an increase in social tension in society and, in my opinion, emergency, not merely extraordinary, measures are needed. In this respect I would not reject the idea of additional credits, no matter how difficult this measure might be. An all-around and careful study of the problem and of immediate and remote consequences is needed here.

Of course, everything is not quite as simple as it seems when one becomes familiar with Professor Yanov's arguments. I am not familiar with the figures cited by him. However, the essence does not even lie in them. The sale of the gold reserve is a very responsible matter. One has to think seven times here. Moreover, if large batches of gold are thrown on the world market, prices of the precious metal will drop immediately. Where will the advantage be? Or the "gigantic reserves for a black day"—I don't know whether they are so gigantic, but we should have reserves. Both Chernobyl and the earthquake in Armenia have once again demonstrated this. In brief, everything is much more complex in life than in a plan.

And the chief question: How to give back these additional 25 billion dollars? There are various proposals by specialists: To sharply increase foreign tourism (in addition to hotels, using rest homes, all kinds of luxurious hunting lodges, summer cottages in green zones and on the seacoast, apartments rented out by city dwellers, and so forth for a few years) and to think about concessions, expansion of the commercial aspect in cosmonautics, and many other things. Here, too, not everything is simple. A careful analysis is needed. It is very important to determine whether we will succeed in launching the economic mechanism so that in the very near future we could export the goods of joint enterprises, as well as those produced on purchased equipment at the best domestic plants and factories.

Reducing our losses, which are vast, represents a big potential. I think that in a few years they will amount to

20 billion rubles. But how to reduce these losses? An economic mechanism, which would solve this problem, is needed.

I am talking about all these complications not in order to bury this idea. Just the opposite: In my opinion, an overall analysis should help to find the optimal ways of solving this problem. Of course, some sacrifices will have to be made temporarily. However, a significant replenishment of the consumer market and its stabilization will give a considerable advantage. This will not only greatly weaken social tension, which, as it seems to me, is now rising to a critical point, but will also make it possible to accelerate the course of perestroika significantly.

[Correspondent] You said "to a critical point." Consequently, the time factor acquires paramount significance. If a large amount of goods is purchased, how to deliver them to our consumers? Alexander Yanov proposes that this be done by cooperatives under state control...

[Orlov] I think that this will not do for present emergency measures. And, of course, state trade will not cope with this either. The reloading in ports and at railroad stations, then the long drawn out proceedings at warehouses, and waiting for documents, agreements, and instructions... It is difficult to accelerate an inertial and sluggish machine. This is one aspect of the matter. And the other—our stores simply will not cope with the increased flow of goods. Therefore, as it seems to me, the delivery plan should be completely different.

And so, if, let us assume, we nevertheless take an extraordinary step and make mass purchases of goods abroad, I am firmly convinced that at the first stage their delivery to the consumer should also be made in an extraordinary manner. Under special control, using not only railroad and motor transport, but also the capabilities of the army, we must give the green light to a direct transfer of goods to the consumer, expanding mobile dismountable assembled modules, and engaging in sale (bypassing the trade network) at the place of work and residence. In brief, in an army manner. The population must feel a decisive breakthrough in overcoming the commodity shortage very quickly—in only a few months. I am afraid that we do not have a big reserve of time. This applies especially to food products.

In our country today stocks of goods per ruble of the commodity turnover are estimated at 15 kopecks. This is an unprecedentedly low level. The situation that has been created requires extraordinary measures.

[Correspondent] However, what will such additional purchases abroad give? We will spend everything on food and will be in an even more difficult situation?

[Orlov] We will, if we sit with arms folded. However, a saturation of the consumer market is also needed in order to create trust among people and so that economic reform, finally, begins to work. When the ruble becomes

a ruble and when cost accounting and leasing begin to operate truly, the entire new economic mechanism will be turned on and things will go right. Deliveries of goods for export and for the domestic market will increase, which will help us both to pay back our debts and to get out of the crisis.

[Correspondent] What is to be done with our light and food industries under the conditions of competition with Western products? Are we to curtail these sectors?

[Orlov] Under no circumstances. On the contrary, only then will the demonopolization of our enterprises and competition begin and this will force us either to raise the level of products, or to sell them more cheaply. In brief, a search for ways of increasing work efficiency will begin.

[Correspondent] TRUD readers write that a shadow economy, speculation, and crime are developing in our country, but the center seems to be afraid to use power and to act according to law...

[Orlov] I also read such letters and am familiar with such positions. You see, the situation is very complex here. On the one hand, under no circumstance should we go back to the "strong hand" (yet there are calls for this). On the other, in my opinion, democracy and the transition to primarily economic methods of management by no means should signify the weakening of the center's role in the solution of main state problems—for example, in the realization of priority social programs for food, housing, and goods. Only with this is it possible to protect everything that is new and valuable, which was born in the course of perestroika. And perestroika itself—this is especially clear now—needs protection. Today, when the crisis has been aggravated to the maximum, I consider the strengthening of the role of central authorities necessary for a strictly determined time.

[Correspondent] But the same arguments were also presented at the end of the 1920's and everyone knows what happened...

[Orlov] In order that this may not happen, a strong protective mechanism is needed. It can give reliable guarantees. In the meanwhile we must protect perestroika, our common chance. I will not discuss details—different ways are proposed: presidential rule and many other things. At the same time, decisive, strict measures to combat speculation, the shady economy, and processes of destabilization are needed. Life demands an increase in discipline and responsibility.

In conclusion I would like to say the following: Yes, it is difficult for us now. All the more so, it is important not to become panic-stricken, not to be nervous, to find additional resources, and to overcome the forces of hindrance and inertia. We must go through the illness of the transitional period in order to become strong and to build a state worthy of our people. Our people are remarkable...

## ELECTRIC POWER GENERATION

### Ecological, Bureaucratic Controversy Over Bashkir AES Detailed

904E0088A Moscow SOVETSKAYA ROSSIYA  
in Russian 11 Apr 90 Second Edition p 4

[Article by Doctor of Chemical Sciences Professor M. Safarov and writer B. Pavlov: "A Dangerous Fault—Departmental Ambitions Are Hindering Evaluation of the Public Arguments Against the Construction of the Bashkir AES"]

[Text] The construction of the Bashkir AES [nuclear power plant] is arousing the anxiety of the public in the autonomous republic. The Bashkir Soviet of the All-Russian Society for the Protection of Nature has thus performed a public-science ecological expert analysis of the plant design at its own initiative. Dozens of scientists from virtually all the scientific institutions of the republic studied all aspects associated with the construction of the plant. What did the analysis show?

The construction began before the comprehensive analysis of the ground on the terrain. It must be said that strong geological services are operating in Bashkiria, and there exists good scientific support for it. The ground structure of the territory of the republic has been studied up and down. The site selected for the AES was not a blank spot for our geologists either—the specialists knew almost everything about it. But no one asked their opinion, no one tried to consult with them, and a serious "imposition" has thus occurred.

The Bashkir AES [BAES] has been "tied" to a site that is on a tectonic fault, in a hazardous zone. This is confirmed by space-photography data. The region moreover has a seismicity of 5-6. "Disturbances in the soil over the fault," concludes M. Kamletdinov, director of the Institute of Geology of the Bashkir Science Center of the USSR Academy of Sciences Urals Division, and Yu. Kazantsev, head of the structural-geology laboratory, "could occur at any time..." And then catastrophe is inevitable.

Honored Geologist of the RSFSR and USSR State Prize Laureate V. Yakhimovich was just as categorical in his conclusions: "There was no profound scientific analysis of the geological structure in the design engineering... The insufficient regard for the complex tectonic situation in the region of the AES site unequivocally resolves the issue of the impossibility of continuing with construction." And later, something quite terrible: "The system of faults occurs not only along the Kama, but directly under the foundations of the AES..."

Even Glavekspertiza [Expert Analysis Main Administration] of USSR Gosstroy [State Construction Committee] noted that "the foundations of all the buildings and structures are on clayey soil and clay with poor bearing capacity." But that did not alert them at Gosstroy, and they supported the idea of Glavekspertiza deputy Ye.

Minayev, who proposed constructing the foundation out of reinforced-concrete pilings up to 18 meters long. The inventor of the idea meanwhile did not answer as to what the pilings themselves would be held up by. And they will sag in the sand-and-gravel sediments of the bottomland terrace of the Belaya River.

The history of the origins of the project near the mouth of the Belaya abounds in such instances. The members of the expert commission of the Bashkir Council of the VOOP [All-Russian Society for the Conservation of Natural Resources] had to familiarize themselves with documents that were surprising in the degree of their absurdity and irresponsibility. One of them, for instance, says that "Allowing for the fact that the start of construction of the Bashkir AES was permitted before the development and approval of the technical plans (?!), Gossan-nadzor [State Committee for Health-Safety Supervision] feels that it is possible to consent to the drawings for the general plan of the BAES as an exception (?!)." The signature was that of the deputy chief state physician of the USSR, V.A. Turovskiy.

The consent for the drawings thus moved up the departmental ladder "as an exception." We are right to ask, from the point of view of the bitter experience of Chernobyl, what "exceptions" there can be when we are dealing with the atom. But the nuclear-power people are waving false documents around as documents of state importance even today. Whence such arrogance?

The economic substantiation for the construction is also undisputed. Yes, we are still short two billion kilowatt-hours [kWh] of electric power to cover the needs of the national economy in the autonomous republic. But is that really grounds to build a 35-billion-kWh AES? It is well known that the start-up of two new power units of 0.8 million kilowatts [kW] apiece is planned at the Karmanovo GRES [state regional electric power plant] (right next to the BAES) before the end of the 13th Five-Year Plan, which will provide 14 billion kWh a year and cover the growing needs of the republic for electric power with some to spare. And where, by the way, are the calculations for the incorporation of energy-conserving technologies and the development of ecologically clean types of power engineering?

The plans also have no well-defined developments or determination of the place for burying, transport or reprocessing of radioactive wastes or technology for the dismantling of the plant.

The VOOP Council of the Bashkir ASSR submitted the results of the expert analysis to the public-science conference that was held recently in Neftekamsk. The conference adopted this resolution: "The plans for the BAES, being ecologically groundless, economically unsubstantiated and posing a real threat of catastrophic consequences on a global scale to the nature and population of not only Bashkiria, but the whole Volga-Kama basin, must be rejected, and the construction halted

immediately. The construction of the AES must be reconfigured into ecologically safe facilities for the national economy."

USSR Minister of Power and Electrification Yu. Semenov, who was present at the conference and heard the conclusions of the scientists, said that if everything that had been said corresponded to reality, the construction would have to be halted. But several days later, at a session of the USSR Council of Ministers that was broadcast on central television, he complained about the resolution of the "public conference," for some reason forgetting to add the word "science." The complaint found understanding among the leaders of the USSR Council of Ministers. This retreat of Yu. Semenov, however, elicited a feeling of dissatisfaction, to put it mildly, with the minister of power engineering—from whose words governmental policy is made in relation to the BAES—in public and scientific circles in Bashkiria.

A conference was held at the office of USSR Council of Ministers Deputy Chairman L.D. Ryabev two days after the session in the Kremlin. BASSR Council of Ministers Chairman M.P. Mirgazyamov there made public the resolution adopted at Neftekamsk. But there was no discussion of a suspension or a halt to the construction of the BAES. It is possible that the Bashkir delegation was to blame for this—they were unable to get across to the conference participants either the ecological aspects or the economic and socio-economic situation in the republic. A protocol appeared that thus produced an exceedingly contradictory impression.

The Academy of Sciences was instructed to form a commission within a month "for a detailed analysis of the seismic, geological and hydrological features and the well-foundedness of the choice of site for the Bashkir AES." The results of the work of the specialists involved in the public-science expert analysis, in other words, received no attention. Goskompriroda [State Committee for Environmental Protection] was moreover charged with conducting a comprehensive expert ecological analysis of the plans for the AES and presenting their conclusions in June of 1990. USSR Minatomenergoprom [Ministry of the Nuclear Power Industry] and Minenergo [Ministry of Power and Electrification] were charged with "presenting within a month... the necessary calculations and substantiations confirming the sufficiency of the measures envisaged in the AES plans to ensure safety..."

One might ask how material substantiating the sufficiency of AES safety could be presented in a month if the "comprehensive expert ecological analysis" will only be completed in seven months?! Does that mean that a positive conclusion—that is, the one needed by Minatomenergo—has already been predetermined?

Funds are generously allocated in the protocol for the creation of "a BAES public-information center." The "essential elucidatory work" must be understood

unequivocally—in the direction needed by the nuclear-power people and against the conclusions of the Bashkir scientists.

The protocol has another extremely curious clause—a trip to France at the beginning of the year by a group of representatives of the public and people's deputies "to become acquainted with measures to ensure AES safety." One of us, having received a personal invitation to make the trip, thanked the agency for the tempting free trip to Paris, but proposed an alternative instead: it would be better to travel to Sweden, where they have rejected AESs. The agency leadership, however, expressed no enthusiasm whatsoever on that score. I would like to ask the question of the authors of the idea of this trip anyway: are French AESs also situated on faults and quicksand?

The decision that was made on "a comprehensive expert ecological analysis" is nothing more than an attempt to placate public opinion and stall so as to avoid a halt to construction later. But no one can still be disputing today the conclusion of the unfounded nature of the project that was arrived at by the Bashkir scientists. There are still only attempts to brush off our conclusions and ignore them.

A referendum was conducted on the construction of the BAES by decision of the sessions of the Neftekamsk City and Krasnokamskiy Rayon soviets. Some 99 percent of the votes were against it.

#### Various Aspects of USSR Energy Program Discussed

904E0069A Moscow *PRAVDA* in Russian  
18 Feb 90 Second Edition p 3

[Article by Doctor of Economic Sciences M. Khodzhayev, director of the Economics of Power Engineering Scientific Research Institute: "How to Live Further"]

[Text] The ever-increasing rates of the consumption of energy resources, the limited nature of their natural reserves and the ecological impact of power engineering on the environment has more than once engendered all kinds of forecasts concerning an approaching energy catastrophe on the planet. Fortunately they have proven to be premature. However, this does not at all indicate the absence of an energy supply problem. It is rather acute. The draft CPSU Central Committee Platform speaks clearly about this. The internal situation that alarms us and ways of escaping it and of subsequent movement cannot be depicted without taking processes occurring in the world as a whole into account.

At current rates of energy consumption the earth's proven reserves of organic fuel will last approximately 150 years, including 35 for oil, 50 for gas and 425 years for coal. How to live further? Indeed, doesn't an energy famine threaten us?

Analysis indicates that the future is not so very dismal. It is known that the average annual rates of growth of energy consumption are declining both in the world as a whole and in our country. Whereas in the '50s it grew by 5.2 percent annually, in the '80s it grew by only 1.2 percent. Moreover, this trend is steady and of long duration. In addition, the proven reserves of organic fuel on the planet are growing faster than energy consumption.

Of course, one needs to save energy in every way possible if only because, for completely objective reasons, fuel costs us more and more every year. An energy-saving policy should also be considered one of the most effective methods of reducing the negative impact of power engineering on the atmosphere. In discussing the future and even the distant future, as a rule, we proceed from the present situation and transpose to the time segment being forecast only what we know today. But the fact is that in the forthcoming period some kind of fundamental, often unpredictable, changes can occur. On the eve of this century the share of coal in the world's energy balance was about 60 percent. Electric power engineering, the basis of modern technical progress, was taking only its first timid steps and people were afraid of electricity no less than they now fear radiation. Even visionaries were not able to dream about nuclear power. The share of coal has declined drastically during the time that has passed. The role of oil increased intensively in the first half of our century and that of natural gas in recent decades. The relative share of nuclear electric power plants in world production of electric power has reached 16 percent and in certain countries, such as France, it exceeds 70 percent.

In our country the relative share of AES [nuclear electric power plants] in the total production of electric power is more than 12 percent. For a long period the prospects for electric power in the European part of the country were based on the forced development of nuclear electric power plants. However, the fatal accident at the Chernobyl AES in 1986 has made this orientation problematical. The predictions of specialists about a significant rise in the level of the reliability and safety of nuclear reactors are, first of all, not sufficiently convincing. Secondly, guaranteed safety can be achieved only at great cost, which makes the competitiveness of atomic sources in comparison with other possible variants doubtful.

The economic potential of hydroelectric resources in the USSR amounts to 1.095 billion kilowatt-hours. In all only about 20 percent is being utilized at the present time, which is three-four times less than in the countries of Western Europe. However, a public movement against the construction of large-scale GES has developed in recent years. Caused by the negative consequences of large integrated hydro-schemes on lowland rivers, it, unfortunately, is often extended to hydropower engineering in general. In fact, gigantomania did dominate in domestic hydroelectric power construction for a long time. Almost half of our capacity is concentrated at superpower GES of two million kilowatts and more each.

At the same time medium-sized and small rivers are inadequately utilized. I think that it is time to turn our basic orientation to the top-priority use of their energy potential, primarily in mountainous and piedmont regions.

As far as other renewable or, as it is usual to say, nontraditional energy resources (solar, wind, geothermal) are concerned, and many place great hopes on them, there are no objective grounds to expect them to play a substantial role in the energy balance of the next 20-30 years. Analysis indicates that the unit capital investments for their creation and cost of the energy produced are several times higher than at the electric power plants of traditional heat and power engineering. At existing and anticipated prices for fuel within the country and on the world market the use of nontraditional energy resources is justified only for the solution of local problems.

The advocates of the accelerated development of non-traditional energy sources cite their ecological cleanliness. These claims are often unsubstantiated and unconvincing. Nobody can now properly imagine the ecological consequences of the wide-scale use of solar, wind and geothermal energy. Remember: the negative impact of traditional power engineering began to be seriously talked about only after its development to an enormous scale and on the basis of the experience of the operation of thermal- and hydro-electric power plants over many decades. Can we be certain that something similar will not be repeated with nontraditional electric power plants?

Some scientists propose putting 15-20 million kilowatts of capacity of nontraditional energy installations into operation annually in our country. But is the achievement of this program realistic?

About 10 million kilowatts of all types of electric power plants were put into operation annually on the average during the last two five-year plans. During the first four years of the current five-year plan, with all the efforts of the builders of electric power plants, the annual commissioning came to less than eight million kilowatts. Considering that the cost of nontraditional electric power plants is two-three times higher than the traditional ones, one would have to increase the volume of construction and installation work and, consequently, the capacity of power plant construction organizations by five-six times. One should further add to this the need for the development, mastering and production of new equipment to which power machine-building enterprises are unaccustomed.

Analysis of the developing energy situation yields sufficient grounds for the assertion that in the next 20-25 years heat and electric power plants, which now provide about 75 percent of the electric power produced in the country, will remain the basic source of energy.

A steady trend in the growth of the share of natural gas in the fuel balance of electric power plants at the expense of

a reduction in the consumption of mazut has been observed in the recent period while the relative share of coal has remained practically level. And in the future, pending the creation of ecologically clean coal power engineering, the growth of the production of electric power at heat and electric power plants will probably result from the use of gas fuel. The advisability of exporting it, when the price on the European market (as for oil as well) has approached the socially necessary cost of extraction and transport to the western borders, requires critical analysis.

As is well known in the Energy Program the prospects for electric power engineering are based on the forced development of nuclear power engineering and the accelerated creation of a system of powerful heat and electric power plants based on the coal deposits of the eastern regions. The time has come to frankly admit that these calculations are not very justified. The construction of super-power GRES in the Kansk-Achinsk and Ekibastuz coal basins as well as of 1,500 kilovolt direct current electric power transmission lines, has dragged on for many years. A whole series of problems have arisen in the course of constructing these projects. The problem of environmental protection was not so acute 10-15 years ago as it is now. It was assumed that a high degree of concentration of energy capacities in one spot would ensure an increase in production efficiency. According to the logic of things each succeeding electric power plant in the system should be cheaper, or at least no more costly, than the preceding one. But in fact this has not occurred. According to project data, Berezovskaya GRES-2 will cost approximately one-third more than the first, mainly because of the need to implement expensive environmental protection measures. A similar trend is also being observed with respect to the GRES of the Ekibastuz Fuel and Power Complex.

One must assume that at subsequent electric power plants of KATEK (Kansk-Achinsk Fuel and Power Complex) these costs will be even higher since harmful emissions into the atmosphere increase in proportion to the growth in the volume of coal being burnt. The concentration of a large number of GRES in combination with thick open-pit coal mines requires a new approach to the evaluation of the ecological situation and economic efficiency. For now one thing is clear: the wide-scale utilization of Kansk-Achinsk coals for the production of electric power is unlikely without their being up-graded where they are mined and the dispersing of the GRES at a considerable distance.

Serious thought has to be given to whether in the future we should so widely develop the combined production of electric and thermal power, i.e., continue to build TETs everywhere there is sufficient heat demand. In fact, the combined production of these two types of energy has a number of unquestionable advantages. However, such problems cannot be solved by formal methods; they require an integrated approach that takes into account costs in related elements, particularly the possible damage to the air of the cities.

Unlike the majority of industrially developed states, in our country the monopoly of a single ministry has been established in the supplying of electric power as in no other branch of production. This, on the one hand, essentially makes the users of electricity disfranchised petitioners and, on the other, not responsible for the normal provision of energy for their needs. The existing procedure leads to a situation where projected industrial enterprises state their needs even before the start of construction but bear no economic liability whatsoever for not commissioning energy-consuming installations on time.

It appears that it is advisable to place responsibility for supplying energy to major users on the appropriate departments by more widely engaging in the practice of constructing industrial electric power plants using the consumers' funds and contract power plant installation organizations. Such electric power plants can transfer the excess electric power to the local power system grid at agreed-upon prices.

Among the most important tasks in perfecting the economic mechanism in power engineering is the establishment of full-fledged khozraschet relations between power systems and the energy users and fuel suppliers. Up till now they have been regulated to a considerable extent. Now effective economic stimuli must be created and a scientifically valid concept for the rationalization of the fuel supply of electric power plants based on economic principles developed.

In the implementation of the regional economic accountability envisaged in the draft CPSU Central Committee Platform, a mechanism for the economic ties of energy enterprises with local authorities must be worked out. A reinterpretation of the territorial distribution of energy enterprises and of inter-regional energy transfers becomes important in this connection. The Energy Program requires revision also in the context of the expansion of the rights and responsibilities of republics, krays and oblasts. I think that regional economic accountability should and can expand not only the rights but also the responsibility of the republics for the development of power engineering and a steady power supply within its own territory.

#### **Roundtable Discusses Future of Chernobyl AES**

904E0076A Kiev PRAVDA UKRAINY in Russian 15 Feb 90 pp 1, 3

[Article by RATAU [Ukrainian News Agency] correspondents Yu. Zabolotnyy and A. Trotsenko: "The Chernobyl AES: Modernize or Eliminate?"]

[Text] The title was the theme of a roundtable held in Kiev at the initiative of the Ukrainian Republic Committee for the Defense of Peace, the Ukrainian *Zeleniy svit* [Green World] Association, the UkSSR Academy of Sciences and the Ukrainian Board of the Scientific and Technical Society of Power Engineers with the participation of well-known scientists and specialists from

Moscow and Kiev, the directors of AESs [nuclear power plants] located on the territory of the republic, and state and public figures from the Ukraine.

Opening the meeting, the chairman of the Committee for the Defense of Peace, writer Oles Gonchar, said that an international seminar on the draft of "Eurochernobyl" organized by the Ukrainian and Soviet committees for the defense of peace with the support of the World Peace Council had been held right in that same hall a year ago. Scientists and public figures from the countries of Europe and the American continent had taken part in it. And they had all come together on the fact that the Chernobyl tragedy had already been recognized by all the peoples of the world as a global catastrophe rather than just a disaster for the Ukraine, Belorussia and a number of regions in the Russian Federation that had been stricken by the accident.

Emphasizing that the upcoming session of the Ukrainian Supreme Soviet would be considering the ecological situation in the republic, he expressed the hope that the proposals devised by the roundtable participants would become the property of the session's resolutions. Despite the fact that almost four years have passed since the accident, said Oles Gonchar, many problems remain that require immediate solution. People are demanding the closing of the AES at Chernobyl in particular. They are troubled by the future of the other nuclear power plants saturating the Ukraine. How will the fate of the people that are still living on lands with enhanced radioactive pollution and subject to immediate evacuation take shape? I hope, the speaker noted, that we will find a sensible answer to these sore subjects together.

We did not assemble this roundtable just to prepare for participation in the upcoming session of the Ukrainian Supreme Soviet, but also to obtain quality information for the creation of a draft Law on Nuclear Facilities on the Territory of the USSR and Nuclear Safety. This draft is now being prepared with a regard for international experience and what happened at Chernobyl, said the writer Yuriy Shcherbak, chairman of the Ukrainian *Zeleniy svit* Association and a USSR people's deputy, serving as the head of the subcommittee on issues of power engineering and nuclear ecology of the USSR Supreme Soviet Committee on Ecological Issues.

He emphasized, pertaining to the problem of the Chernobyl AES, that the issue is that a nuclear-danger zone has actually taken shape in the center of Europe. The amount of emissions, the degree of contamination and the negative consequences all testify to this. That is why we need to have discussions today from the standpoint of candor, objectivity and responsibility before the future for the fate of our land. We have never assembled in such a prestigious group, and this will help us hold the dialogue today. We have been holding only monologues so far, thrusting our opinions on each other. Some have been saying how beautiful nuclear power is, that no problems whatsoever exist here. There has, on the other hand, been an unreserved deflection of all problems

associated with nuclear power that has been caused to a large extent by the shock of the Chernobyl tragedy. In discussing the problems of the Chernobyl AES, we should approach it not only from the standpoint of technocratic, technological or even power-engineering considerations alone, but rather recall first and foremost that this is a political matter, a problem of socio-political stability.

At one time, the speaker continued, I proposed resolving the issue of halting operations at the Chernobyl AES as a facility that causes great unease and tension among the population of Belorussia and Russia as well as the Ukraine—along with as declaring a five-year moratorium on the construction of nuclear power plants on USSR territory—until the problem of safe reactors is solved. Thousands of letters have come to our subcommittee that express similar opinions on all the nuclear facilities across the country.

Doctor of Technical Sciences A.A. Abagyan, director of the All-Union AES NII [Scientific-Research Institute], Doctor of Technical Sciences Ye.O. Adamov, general designer of the All-Union NIKI [Scientific-Research and Design Institute] of Power-Engineering Technologies, M.P. Umanets, director of the Chernobyl AES, and A.L. Lapshin, head of a main administration of USSR Minatomenergoprom [Ministry of the Nuclear Power Industry], provided elaborations on issues that pertain to a further rise in the operational safety of existing power units at AESs in the Ukraine making use of international experience, the development of new and more advanced reactors, a rise in the skills of support personnel at AESs and the training of personnel for them, and the prospects for the development of nuclear-power engineering in the country. While acknowledging that the Chernobyl AES does not conform to contemporary world standards for the operational safety of nuclear electric-power plants, they favored the continuation of its operation until the operating power units have completed their rated service lives (which should occur for the first unit, say, no sooner than 1995-96).

Other participants in the roundtable who spoke in the debate did not agree with this viewpoint. Doctor of Physio-Mathematical Sciences V.V. Tokarevskiy, head of the nuclear-power department at the Nuclear Research Institute of the UkrSSR Academy of Sciences, UkrSSR Academy of Sciences Vice President and Academician V.I. Skok, Spetsatom [Special Nuclear] NPO [Scientific Production Association] General Director Yu.N. Samoylenko, and Candidate of Technical Sciences Yu.L. Tsoglin, head of the AES safety department at the Nuclear Research Institute of the UkrSSR Academy of Sciences, among others, demanded a halt to the activity of the Chernobyl AES right down to its complete elimination in the near future.

"The fact that many of my colleagues from the nuclear agency," said UkrSSR Minister of Power and Electrification V.F. Sklyarov, "are even today defending their pre-accident positions, so to speak, on the concepts of

nuclear-plant safety distresses me very much. I am firmly convinced that no responsible specialist can say today that he guarantees the complete safety of AES operation." The minister also emphasized that a halt to operations at the Chernobyl AES would cause considerable economic losses. All aspects of the issue should therefore be reviewed in comprehensive and considered fashion. The people should have the last word here nonetheless: it will be as they decide. And we should execute their will in competent fashion. As a specialist, the speaker stressed, I feel that we should halt the first unit first and foremost, and then think about how to take this plant out of operation altogether. We must develop a concrete program for this.

The presentations of republic Minister of Health Yu.P. Spizhenko, USSR People's Deputy and writer V.A. Yavorivskiy, UkrSSR Red Cross Society Central Committee Chairman I.I. Usichenko and others were dominated by the thought that the fate of the person and his health, in spite of all the calculations of the economic and technical losses that are inevitable in the elimination of the Chernobyl AES, should be the most convincing argument in favor of making such a decision.

The chairman of the Foreign Affairs Commission of the UkrSSR Supreme Soviet, A.V. Merkulov, spoke of the necessity of expanding the international collaboration of the UkrSSR in the realm of nuclear-power engineering, making more effective use of world experience in the safe operation of nuclear-power plants and having the republic take broader part in the activity of the IAEA.

UkrSSR Council of Ministers Deputy Chairman K.I. Masik dwelled in particular on the basic provisions of the draft Comprehensive Program for Eliminating the Consequences of the Accident at the Chernobyl AES.

Oles Gonchar, summarizing the results of the discussion, said that even though not all the participants were in agreement with the call for an immediate halt to the Chernobyl AES, the future of our children must always be remembered in solving this problem.

The participants in the roundtable approved a proposal regarding the future of the Chernobyl AES and resolved to include it for the consideration of the UkrSSR Supreme Soviet.

Guests from the United States who had come to the Ukraine to give gifts from American and Canadian Ukrainians to children who have suffered from the Chernobyl accident were present at the meeting.

#### **RSFSR Deputy Minister Tabeyev on Situation At Chernobyl**

904E0068A Moscow SOVETSKAYA ROSSIYA in Russian 28 Feb 90 p 2

[Interview with RSFSR Council of Ministers First Deputy Chairman Fikryat Akhmedzhanovich Tabeyev by V. Mikhaylov: "Our Common Anguish—RSFSR

Council of Ministers First Deputy Chairman F.A. Tabeyev Talks About Eliminating the Consequences of the Chernobyl Catastrophe"]

[Text] They noted a sharp rise in radioactivity at Novozybkov before they found out about the catastrophe at Chernobyl: classes were being held in dosimetry at the pedagogical institute, and the instruments suddenly began to go off the scale. There were regions, meanwhile, where people remained ignorant for a long time, not suspecting the terrible danger hanging over them. The true scale of the disaster that befell the RSFSR was not known right away. News of it broke into the nationwide press much later, only in the spring of last year, and SOVETSKAYA ROSSIYA accomplished the breakthrough using the materials of TASS staff correspondent Yu. Lodkin. The fact is, however, that an operations groups was already active in the RSFSR Council of Ministers at the end of April of 1986; it had taken on the resolution of all the problems that arose before the inhabitants of the stricken regions. A great deal has been done since that time. A number of new decisions were made literally the other day dedicated to seeing that the situation of those that suffered the misfortune of radiation is eased. Our discussion today with RSFSR Council of Minister First Deputy Chairman F.A. Tabeyev is about them.

[Mikhaylov] Fikryat Akhmedzhanovich, it is probably necessary first of all to outline the scope of the disaster...

[Tabeyev] It is difficult to describe, it must be seen with one's own eyes. I traveled through many villages and towns in those areas. It would happen that up to a hundred people, agitated and alarmed, would gather at some well, store or club. Put yourself in their place. Imagine that everywhere you might go you could encounter dangerous radiation, moreover invisible. You don't know how to take care of yourself—personal dosimeters are still a rarity. Our people are fortunately courageous no matter what, no one was giving up, panic was rare. I note in particular that Bryansk Oblast, despite the adversity, has moved forward in agriculture.

But let's move away from emotion and address the precise statistical data of USSR Goskomgidromet [State Committee for Hydrometeorology]. Some 5,800 square kilometers in the seven western rayons—Krasnogorskiy, Gordeyevskiy, Zlynnovskiy, Novozybkovskiy, Klintsovskiy, Klimovskiy and Starodubskiy—fell into the radioactive-fallout belt in Bryansk Oblast. There are a total of 641 populated areas on that territory, and about 290,000 people live there. The level of contamination of people in the Kaluga area is considerably less, but the area covered by the Chernobyl emissions is large—roughly 4,000 square kilometers. These are the 159 populated areas of Zhizdrinskiy, Lyudinovskiy, Ulyanovskiy and Khvastovichkiy rayons with a population of 36,000-plus people.

[Mikhaylov] Little is known thus far of Kaluga Oblast. Why?

[Tabeyev] That is difficult to explain. The misfortune is that the dissent among scientists is great. There are even those who are convinced that today's radiation doses are beneficial rather than harmful—they could be compared, they say, to healing baths. Some scientific institutions, at the same time, adhere to the opposite point of view and feel that the extent of the danger is being downplayed. Whom to believe? Goskomgidromet and the physicians have three times clarified the data on the seats of radiation, and three times we have had to expand the zone whose population requires this or that assistance. This traumatizes the population.

We are asked what we were thinking of before. A valid question, it is difficult to justify ourselves. But what can you do? The government of the republic is forced to rely on specialists and scientists and on their conclusions. I will state outright that we have become acutely aware of how much the Russian Federation has been short-changed. The Ukraine and Belorussia have their own academies of sciences and institutes, and we had—and still have—to await the recommendations of all-union institutions.

[Mikhaylov] Well, arguments are arguments and business is business. This is evidently a case where a little playing it safe wouldn't hurt. Better to spend a little extra than to be chastising yourself later for procrastination.

[Tabeyev] Undoubtedly. The standard we are guided by (as set by USSR Minzdrav [Ministry of Health]) says that the total individual dose of radiation, both external and internal, over a 70-year life span should not exceed 35 rems. All of our efforts are aimed directly at seeing that we do not go beyond the limits set by the physicians. Some 760 million rubles have already been spent on various types of protective measures. Almost 390,000 square meters of housing have been built in particular. According to our calculations, two billion 250 million rubles will be required for its implementation.

What specifically is being planned? The lifetime exposure will doubtless exceed the allowable norm in some places. The removal of people from 31 populated areas numbering some 4,725 people no later than 1992 is thus planned. It is entirely likely, however, that the numbers I have mentioned will increase; it looks like there are several more towns and villages where it is better that people not stay.

The territories where the density of radioactive contamination exceeds 15 curies [Ci] per square kilometer have been singled out and put under strict monitoring in particular. There are some such 276 populated areas where 115,600 people are living today. The livestock had to be collectivized here at once so that the local milk or meat did not under any circumstances end up on somebody's dinner table. Everyone in this zone is provided with pure, trucked-in produce and receives a monetary stipend on the scale of thirty rubles a month per person. Everyone who wishes has the right to leave.

There are also populated areas in which the contamination density is lower than 15 Ci and the consumption of local produce is only partly, rather than entirely, restricted. The opportunity for families that have children under 14 years of age, pregnant women and people for whom remaining here is not recommended for medical reasons to leave these areas at state expense has been granted. It goes without saying that all new settlers within the borders of our federation are guaranteed work, as well as housing within a year.

Many resettlers, as we see, have gathered and will gather. The Bryansk party obkom and oblast ispolkom have from the very beginning done everything possible to ease their lot. The formation of about twenty new settlements for them in the uncontaminated areas is being planned. Over three hundred million rubles will be needed in all to get those stricken set up in the new areas.

[Mikhaylov] Where will that money come from, Fikryat Akhmedzhanovich?

[Tabeyev] A tough question. We had hoped that we would be allocated at least 70 million rubles for the new construction we're talking about here. It didn't end up that way: USSR Gosplan placed all the expenses virtually entirely on the federation. You have, they say, a big republic, find it somewhere. They forget that our requirements aren't so small either, and that we are constantly helping our brethren across the country: we are rebuilding Armenian cities and towns after the earthquake, we took in the Meskhetian Turks, today we are taking in refugees from Azerbaijan, more than 40,000 people in all.

I say this for the sake of objectivity, and not to justify our own mistakes. You unfortunately can't get by without them. RSFSR Minzhilkomkhoz [Ministry of Housing and Municipal Services], Minbyt [Ministry of Consumer Services], Minzdrav and Rosstroygazifikatsiya [Russian Construction and Gas Installation Trust] were all sharply but justly criticized at an expanded session of the Bryansk CPSU Obkom Bureau and oblast ispolkom that was held literally the other day: they have broken a whole series of serious targets and assignments that were given to them by the RSFSR Council of Ministers. We have taken the criticism under advisement, and we will call upon those who are to blame to answer: no one can forgive an indifferent attitude toward the population that has suffered misfortune.

Complaints were also expressed directly toward the RSFSR Council of Ministers at the Bryansk CPSU Obkom Bureau. They were to a significant extent fair complaints, and it is correct that the newspaper RAB-OCHAYA TRIBUNA has relayed them to a nationwide readership: glasnost is glasnost. It is a shame that this feature contained many inaccuracies. We have, for instance, received no proposals from the World Physicians Association on uncompensated assistance for the Bryansk area.

[Mikhaylov] This is all about resettlement within the oblast. But many are quitting the Bryansk area altogether. What about them?

[Tabeyev] There are many all-union and republic enterprises in areas with enhanced radiation; ministries and agencies should be concerned about their specialists and workers and find new work and housing for them. The soviets of people's deputies of the cities and towns of the RSFSR where the rest are headed are obliged to provide housing for them within a year.

[Mikhaylov] Now a little more detail about those who do not intend to part with their native lands...

[Tabeyev] Our mission is to protect them against harmful effects as much as possible. I have already stated that the strict-monitoring zones are being provided with pure trucked-in produce. I would add that the contaminated regions of the Bryansk area are today being supplied with foodstuffs and industrial commodities better than the majority of the regions in our federation, although there are still too many complaints about trade. The assortment of meat and fish products is too narrow, and there is an acute shortage of children's food, canned fruits and vegetables, citrus and mineral water. Requisitions for cheese are not fully satisfied, while there are too few canned dairy products. There are no free resources in the republic, but we are seeking them, and I am sure that we will find a way to help the Bryansk area.

This is well known overall, but I repeat that the residents of areas with enhanced radiation, aside from those already mentioned, are being granted a whole series of other benefits: annual leave for all workers has been increased to thirty calendar days, prenatal leave for women to seventy days and partially paid leave for child care to up to three years, while subsidies to mothers have been doubled. Additional material assistance to children from less-well-off families has been envisaged, and working retirees receive their full pensions regardless of how much they make.

Almost all of the benefits enumerated have moreover just been extended to 505 populated areas, by decree of the RSFSR Council of Ministers, where the consumption of milk and, where necessary, other locally produced foodstuffs is partially restricted. This is over another two hundred thousand people who are paid an average of 15 rubles a month, coming to 36 million rubles a year.

[Mikhaylov] Pure food products help to protect against internal radiation. What about external exposure? How to protect against that?

[Tabeyev] Decontamination has been performed in over two hundred populated areas, and it must be acknowledged all the same that no material impact has yet been achieved. Decontamination must be combined with improvements in order to achieve one. Manpower and, especially, material resources are unfortunately not yet sufficient for that. The decontamination is being supplemented with agrochemical measures.

[Mikhaylov] A great deal evidently depends on the medical personnel...

[Tabeyev] Undoubtedly. Continuous dosimetric and radiometric monitoring of the environment has been set up in the oblast, especially of food products and water. Some 10 additional radiological laboratories have been opened at medical institutions for that purpose alone. Public clinical visits are performed annually, and constant medical monitoring is established for those who live on contaminated territory. Hospitals with almost two thousand beds and polyclinics handling 4,670 visits per shift, along with seven physicians' outpatient clinics, 13 obstetrics and physician's assistant clinics and three preventive-treatment centers, have been put into service there since 1986 in order to manage this task more successfully. Modern medical equipment and medicines, including imported ones, totaling over ten million rubles have been sent to the oblast as well.

The RSFSR Council of Ministers adopted a decree in February of this year on urgent measures to improve medical assistance for the population of Bryansk Oblast living in areas subjected to radioactive contamination. The decree envisages the construction of a radiation-medicine center in the oblast and the creation of a branch of the Leningrad Radiation Hygiene NII [Scientific-Research Institute] on the basis of a laboratory operating in the city of Novozybkov. The organization of an oblast diagnostic center and a number of specialized medical institutions is also planned.

No less than 27 million rubles of equipment, instruments and implements will be supplied to the medical establishments of the stricken regions in the 13th Five-Year Plan in accordance with this same decree.

The government of the RSFSR has decided to organize health centers on the basis of a number of the sanatoria of the former Fourth Main Administration of RSFSR Minzdrav. Over six thousand children and adults suffering from chronic illnesses will be sent there each year from the stricken areas of Bryansk Oblast.

[Mikhaylov] At least the first results of sweeping medical research in the areas with enhanced background radiation have probably now been totaled up. What can you say about them?

[Tabeyev] No illnesses caused by radiation have been detected, whatever may have been written about it. We do not have those facts at our disposal. About ten percent more oncological patients have at the same time been ascertained compared to 1986. Other deviations from the norm are being detected more often. Enlargement of the thyroid gland has been recorded in one out of two children. The duration and severity of non-specific childhood diseases have increased. What is that associated with? The indicators describing the state of health that are worse compared to prior indicators are largely explained simply by the fact that medical examination has finally become regular, and the quality of

diagnostics has gone up. At the same time, medical personnel assume that the effects of ionizing radiation cannot be ruled out.

[Mikhaylov] Fikryat Akhmedzhanovich! Quite a few complaints have come to the editors here from the stricken regions...

[Tabeyev] Complaints come to us as well, many bring them to Moscow themselves. Unfortunately, we do not resolve everything as efficiently and quickly as one would like. The VTsSPS [All-Union Central Council of Trade Unions] and USSR Goskomtrud [State Committee for Labor and Social Problems] have been unable to agree for three months on when to start the leave privileges.

[Mikhaylov] As far as I know, there exists a government commission to eliminate the consequences of the accident at the Chernobyl AES [nuclear power plant], your faithful ally...

[Tabeyev] Not always. The commission is toiling hard and fruitfully, but we would like to see it protect the interests of Russia as persistently and consistently as the other regions of the country. I have already mentioned our action program for the future. The Ukraine and Belorussia have presented such programs to the all-union government as well. They differ in their approaches to the matter, but the stricken territories of all three republics and the people living there are neighbors, they are under one and the same conditions. I feel that we must adhere to unified criteria common to all.

We have no confidence that it will be thus. The sharpness of the perceptions of the calamity that befell us is beginning to be blunted. Meanwhile, we need even more efforts and a great deal of dogged and intensive labor so as to overcome both the material and the psychological consequences of the Chernobyl misfortune as much as possible and as quickly as possible. That is our common anguish and concern—the whole country and all of its republics.

**Author of Anti-Nuclear Book Interviewed**  
*904E0068B Moscow RABOCHAYA TRIBUNA in Russian 24 Feb 90 p 4*

[Interview with author Boris Aleksandrovich Kurkin by RABOCHAYA TRIBUNA correspondent O. Kameneva under the rubric "Problems, Polemic, Experience": "History is Written After Catastrophes—Chernobyl: Our Anguish and Duty"]

[Text] Much is being said in detail regarding the state of nuclear-power engineering in our country and around the world today. The passions surrounding this topical issue, however, are nonetheless not abating. The book "The Burden of the 'Peaceful' Atom" by B. Kurkin that was recently published by the Molodaya Gvardiya Publishing House, which became an immediate bestseller, has simply poured oil onto the flames, as they say. Why does it attract

the general reader? Our correspondent discussed that with the author—ecologist and historian Boris Aleksandrovich Kurkin.

[Kameneva] First of all, why are you, a graduate of the international law department at MGIMO [Moscow State Institute of International Relations] and a docent of the USSR MVD [Ministry of Internal Affairs] Higher Legal School, occupied with such a serious problem as nuclear-power engineering?

[Kurkin] I had no interest in anything of the sort before the Chernobyl tragedy. I quietly nurtured in my heart a faith in the radiant future of nuclear electric power plants. Something like the widespread maxim, "The peaceful atom in every home," which has gained an extremely blasphemous meaning today.

And then came Chernobyl... My friends told me after just a few days that a terrible catastrophe had occurred—not at all what the newspapers were writing. The issue was not just a leak of radioactivity, but rather an awful cataclysm, a meltdown of the reactor core.

[Kameneva] Who are they, your friends?

[Kurkin] Scientists working in the realm of nuclear physics. They were directly affiliated with Chernobyl, but even in the middle of May 1986 they did not imagine the scope of it.

[Kameneva] So no one knew after all...

[Kurkin] Yes, but the most monstrous thing is that those who should have known did not. I experienced a real upheaval when all of this came to light. It was a mystical moment, too: it seemed to me that I was obliged from then on to let not a single word go by concerning this terrible thing that had occurred. And I felt even when I was beginning to collect material that one lie was built on top of another, an untruth on a falsehood, and it became important to me to find out the truth.

[Kameneva] Your book, "The Burden of the 'Peaceful' Atom," has become a bibliographical rarity. It is physically agonizing to read it, because now I do not know how to live: what to eat, drink, what to breathe, where to run... The facts that have been collected in your book are murderous, terrible, interminable. And the most nightmarish thing, in my opinion, is that judging from everything, the nuclear-power people cannot refute your theoretical premises. Where do you get your information?

[Kurkin] Oh, I am now being asked that question in all sorts of offices... I get all of the "secret" material in the book from textbooks and the open press, including the Western press. You just have to set yourself the task of analyzing and juxtaposing the facts.

[Kameneva] I think perhaps you will catch it from specialists for divulging "military secrets"?

[Kurkin] I'll tell you a little story. Our well-known physicist Margulko, obviously by mistake, through oversight, published in his book "Nuclear Power and Radiation Safety" information on the fact that we are pumping highly radioactive liquid wastes into ground waters. No one admits this, and when I try to persuade them that everything was published on pages 214-217, they don't believe it. It turns out that our nuclear people don't read the works of their colleagues. Thus I literally "catch them red-handed" in absurdities. And when I am reproached for the fact that I am an illiterate person in the field of nuclear power, I agree.

A surprising situation is taking shape overall: they blamed me for "not wanting" to talk with nuclear-power people before, and now they are after me but no one will agree to a discussion. There are very many such instances.

[Kameneva] You can understand these people...

[Kurkin] But I don't want to understand them. When the professionals brought the country to Chernobyl, many of them obviously considered the accident to be a normal phenomenon. Here is an example of such, if one may say so, competence. It turns out that the half-life of the long-lived radioactive elements could be reduced by "zoning of agricultural and land-reclamation operations..." That is, by the better working of the land!

[Kameneva] This "discovery" was perhaps made by a person who has never studied in school?

[Kurkin] I copied that out of popular-science brochures that were circulated en masse in Kiev in 1987 and 1989. The author is well known—V. Antonov, head of a public anti-radiation protection lab at the All-Union Scientific Center for Radiation Medicine of the USSR AMN [Academy of Medical Sciences]. This scientific masterpiece received the blessing of the UkSSR Minzdrav [Ministry of Health] and Goskomatom [State Committee for Nuclear Power].

[Kameneva] Rumors are very persistent of late that we are accepting radioactive wastes from other countries to store in exchange for money...

[Kurkin] We really are accepting spent fuel from the CEMA member countries and Finland for storage. We are building AESs [nuclear power plants] in Cuba and India today, and we will consequently be taking in wastes from them as well. The USSR is taking on the role of radioactive trash heap. No country in the world allows itself to do that.

[Kameneva] Have you discovered new data on the Chernobyl catastrophe?

[Kurkin] The conclusion of the experts on the governmental commission on the causes of the accident says that the total emissions of fission by-products were 3.5 percent of the overall amount of radionuclides at the time of the accident. As becomes clear from G. Medvedev's "Chernobyl Notebook," however, about 50

tons (!) of nuclear fuel was discharged and evaporated (!). Another 70 tons were discharged from peripheral areas of the reactor core. Some 120 tons of fuel were discharged from a reactor load of 180 tons. Seventy percent, not three and a half!

[Kameneva] It is interesting that the data were down-played in such a monstrous fashion—by 20 times.

[Kurkin] Yes, let the country know its "heroes." They are governmental-commission experts A. Abagyan, Yu. Sivintsev, O. Shakh, V. Sukhoruchkin, V. Askolov, A. Protsenko, I. Kuzmin, A. Khrulev, L. Ilin, A. Guskova and Yu. Izrael, among others.

It is namely they who are suggesting to people, with great effect if not effectively, that nothing terrible happened. But it follows from these data that about 500 kilograms of plutonium with terrible toxicity and an astronomical half-life—24,000 years—rained down on the country.

Another crime was almost committed quite recently. A congress of radiobiologists was held at which Academician L. Ilin and his team tried to drag in the so-called "35-rem concept." Yes, that is an international norm, but that is for those who live near a nuclear plant. Today they want to put everyone on the same footing!

The Ilinites fortunately got nothing despite strong pressure on the delegates to the congress.

[Kameneva] What guided them in taking such an inhumane action?

[Kurkin] This allows them to make an extraordinary situation the usual one. It means that there is no need to remove people from the contaminated regions of the Ukraine, Russia and Belorussia, that there is no need to pay the "coffin" supplement to wages—those unhappy 30 rubles—etc. They consider a zone where there is from 5 to 15-40 microcuries per square kilometer to be "lightly contaminated" in Belorussia. But villages were evacuated in Kyshtym when there were just two! I don't know who this deception is intended for. Either people who are completely ignorant or people who are absolutely illiterate...

[Kameneva] But truthful information still seeps out of cracks in the agency armor. You can find a map of the contamination now at practically every intersection in the towns and cities of Belorussia.

[Kurkin] It's useless! That map has to be superimposed on a topographical one, and that one is secret. Our people think for some reason that they can hide something from their fellows forever...

[Kameneva] Some scientist, computing the probability of another Chernobyl (the word has now become a common noun!), has brought out the figure of one accident in 10,000 years. I am no mathematician, of course, but I am sure, as a simple Soviet person, that our legendary sloppy work and the great, mighty and monumental "what if" can scarcely be entered into a computer

as data for calculations! If it blows up... If we survive radiation like the cockroaches...

All right, enough of this tone! The nuclear-power people are assuring us today that AES reliability has risen sharply since Chernobyl...

[Kurkin] From where? The "new" VVER-1000 reactor was already obsolete in the design-engineering stage. The issue is now clear with the Chernobyl-type RBMK reactor... But there is another problem. It has turned out that the PGV-1000 steam generator, which should have a service life of 80 years, operates a maximum of 7 years. And in general, as shown by the bitter experience of the South Urals and Zaporozhye AESs, 2-3 years. These developers and their construction continue to be financed.

[Kameneva] They say that nuclear power is the cheapest...

[Kurkin] A pernicious delusion! AESs produce roughly 18 percent of the country's power—insignificantly little. Imagine we are cultivating a tomato garden. And half of them are rotten at the roots. And instead of saving our harvest somehow, we begin to order tomatoes from Egypt, and moreover just a tenth of what is needed... That is roughly our policy in relation to AESs. Such stupendous sums go for the development of nuclear power that no one can even resolve to publish the actual figures. The question of power engineering is in general a question of glasnost.

The cost of an AES in the USSR has quadrupled over the last 15 years. The cost of a single million-watt unit is over 500 million rubles (1.5-2 billion dollars in the United States). Some 45 power units have been built around the country. Some 19 of them are standing idle today due to the poor quality of the steam generators. The economic impact from the operation of all Soviet AESs has totaled just two and a half billion rubles over the whole time they have been in operation.

[Kameneva] Yes, I prepared a quote ahead of time for right here that is very apropos to our conversation. Berthold Brecht: "We have to get to know the method by which our common social life functions using the material of catastrophes... Behind the events reported to us we assume other events that are not reported to us. They are the genuine ones... History is written after catastrophes." Well said, isn't it?

[Kurkin] The most monstrous thing of all is that we have cultivated the type of person who is unaware of what he is creating, on the one hand, and a person who is the object of manipulation, on the other. Here is the paradox: absolutely everyone, starting with the USSR Council of Ministers Bureau for the Fuel-and-Power Complex right down to the last janitor at a nuclear-power plant, is religiously convinced that this junk must not be built—but we build and build and build... Chelyabinsk, Gorkiy, Voronezh, Kostroma, Yaroslavl... Good heavens, who can explain to me what is going on here?

We are digging nuclear graves for ourselves and our descendants with our own hands, and we are even pleased—ah, look how much we have dug...

By the way, the ground should withstand a load of 5 to 8 kilograms per square centimeter in the construction of a nuclear-power plant. This is rock. AESs are not built any closer than 25-30 kilometers from tectonically active faults in the United States. The Armenian and Crimean AESs are being built right on top of such a fault in a zone with seismicity reaching 9.5. The Rovno AES was built on karst ground, which has led to the fact that cracks have appeared in a wing of the AES building, while several dozen sinkholes have formed on the grounds of the plant that have even swallowed up drilling units. The South Urals and Kostroma plants are being built in completely impermissible places.

Only two AESs—the Kola and the Novovoronezh—have been built on suitable ground.

[Kameneva] Now I am going to ask you a question that (I am sure) has long been spinning in the heads of those who have had the patience to read this far. Let's say our country halted the operation and construction of AESs. We will lose power, albeit just 18 percent. Where will we get it? What are the alternatives?

[Kurkin] The West has long been investing enormous sums in the development of non-traditional sources of energy: small GESs [hydroelectric power plants], solar, wind, tidal, geothermal. I see the way out for our country in the incorporation of thermal electric power plants with extensive scrubbing and the incorporation of gas- and steam-turbine installations with efficiency factors that exceed forty percent. That is down the line, however: I am a realist and understand perfectly well that such projects are very difficult to implement in our country today. But it is essential. Meanwhile we need not produce what is not needed. That will be a gain of energy.

Do you know, by the way, that the power-intensiveness of our national income is four and a half times higher than in the United States? The conclusion suggests itself that we need energy-conserving technologies. But they have estimated that 80 billion rubles of capital investments will have to be spent on the largest energy-conservation measures, and roughly 800 billion rubles worth of machine-building output produced. And until that happens (and I fear that it will not happen soon!) we will occupy the shameful first place in the world in the energy-intensiveness of output.

[Kameneva] Are they still building AESs anywhere in the world?

[Kurkin] The developed countries are virtually not building them. No such contracts have been let by the Americans since 1977.

The situation here is the direct opposite: the old thermal electric plants are starting to fall to the ground, and we

generate almost all of our power at them. And after all, here we could obtain methanol—an exceedingly ecological fuel—from the underground gasification of Kansk-Achinsk coal without even polluting the environment!

And in general, science is obliged to propose, but “to be or not to be” should be resolved by nationwide referendum and, finally, the country’s Supreme Soviet. Reports at the USSR Supreme Soviet on October 19 mentioned the fact that 600,000 people—principally young people—have passed through Chernobyl over this time. The collective dosage burden (the radiologists have such a term) has exceeded one and a half million person-rems, which cannot help but have grave genetic and oncological consequences.

It has been established quite precisely that the cost of one day of decontamination across the whole region is about a million rubles. About one billion rubles have been thrown to the wind in the literal sense of the word thus far, since the dose has increased to the initial values over 8-12 months in “cleaned” sectors. Some 945 populated areas in Belorussia are continuously being decontaminated, of which 105 have already undergone this procedure four times, and 398 have been treated three times.

The draft “The Progress of Decontamination Operations in Areas Subject to Radioactive Contamination” contains the sentence, “In view of the low effectiveness of the decontamination of populated areas and with a regard for the unjustifiably high socio-economic expenditures for performing it, halt total decontamination in the contaminated areas starting 1 Jan 90 until the development of scientifically substantiated concepts.”

[Kameneva] And what of the people, the people?!

[Kurkin] The people must be moved out immediately! Immediately! The compilation of a general register of the participants in eliminating the consequences of the accident is now also vitally important. Lists exist, of course, but they are scattered among agencies and republics. Orders to account for the people who have passed through Chernobyl exist, but they are not being fulfilled...

And until the scientists have scientific concepts for the complete and comprehensive decontamination of the contaminated areas of the Ukraine, Belorussia and Russia, no one has the right to cast the people living there to the whims of fate! Otherwise there will be no one to tell the story of this catastrophe...

#### Visit to Kurchatov Nuclear Energy Institute Described

904E0071A Moscow VECHERNYAYA MOSKVA in Russian 2 Feb 90 p 2

[Article by Zh. Avyazova under the rubric “Secrets of the City”: “A Sleeping Minotaur?—Report from a Nuclear Reactor”]

[Text] While leafing through literature on topics interesting to me, I accidentally came across the understated speech of Andrey Dmitriyevich Sakharov at the 1st Congress of People’s Deputies that was published in its entirety by the house paper SOVETSKIY FIZIK. It contains these words: “If we are to swim with the tide, lulling ourselves with the hope of gradual changes for the better in the distant future, the growing tensions could rip our society apart with the most tragic of consequences...”

The report sounded like an alarm bell to many Muscovites—it turns out that right next door, practically in the center of the city, there are several nuclear reactors in operation. This was stated for all to hear at the June (1989) Plenum of the CPSU MGK [Moscow City Committee], where it was declared that the reactors must be halted. And that the degree of their safety must be verified as a start. Immediately.

How is the promise made to Muscovites being kept? With the intention of ascertaining that, I went to the entryway of a scientific institution that to this day is veiled in secrecy—the Atomic Energy Institute imeni I.V. Kurchatov.

And now party committee secretary S.V. Antipov and I pass by guard station after station without delay, drawing closer to the holy of holies, the area where several nuclear installations are located.

“You allow access to the reactor without special permission?” I asked the deputy director of the institute, Ye.P. Ryazantsev, with interest. “Yes, we have visitors practically every week now,” answered Yevgeniy Petrovich. “I recently met with an initiative group from the ecological movement. We talked for a long time, we agreed to have closer contacts...”

So it seemed to me that if even the nuclear agency is beginning to open up to the “greens,” we have a right to count on candor—and I asked a question that is repeated in many letters to the editors: “How many reactors are there at the institute?”

“There are six or seven in continuous operation,” answered Yevgeniy Petrovich. “Two of them are the most significant—the MR materials-studies reactor and the IR-8 research reactor. The first is stopped now for fuel loading, the second is operating.”

I naturally preferred to visit the operating one. But first I decided to ascertain the attitude of the chief specialists of the institute toward the assurances from the rostrum of the plenum of the party city committee that the potentially dangerous facilities should be removed from Moscow.

“Yevgeniy Petrovich, many Muscovites are demanding that the reactors be halted immediately. What is hindering that? The impression has taken shape among many residents that the nuclear-power specialists, as they say, have ‘dug in’ in the capital and simply do not want to leave the mild Moscow climate zone...”

"That is a delusion, and it exists because trustworthy scientific information, as a rule, does not reach the public," said Ryazantsev. "That is our fault as well, we have still not learned how to react in timely fashion to public opinion, the more so to form it objectively. There are no secrets here. There are potentially dangerous types of production and technology in Moscow, as in other cities, by the way. The research reactors must be relegated to that group as well."

Understanding that, we were developing a program back in 1985 in which the creation of research centers outside Moscow and the transfer of the principal operations for AES [nuclear power plant] safety there was planned, while the existing installations would be removed from operation by the year 2000. Then the new reactors and laboratories, far from the city line, would take up the work that is being performed at the institute today. The program had already been approved by the former ministry, but the Chernobyl tragedy knocked everything out of balance for several years and the work was halted. It is being brought back to life again today, however.

Locations for the research centers have already been selected that are not on densely populated terrain, including in the Moscow region, but issues of financing these operations have not been resolved and there has been no final coordination with the local authorities. We cannot, of course, fail to allow for the opinions of the local residents, although their agitation regarding safety is more emotional than substantiated.

"But after all, people must be told candidly what to expect from a research reactor, whether their apprehensions are realistic or exaggerated!"

"We must, of course, be based on facts rather than emotions. And the facts are as such: there are currently 325 research reactors in operation around the world. They number 99 in the United States alone. Everyone probably does not know that such reactors are in operation in many of the cities of other countries—France, for example, at the AFINEcenter. A nuclear power plant, and moreover the largest in the world, is located next to a resort in Japan, as has been reported in our press. Here, I repeat, the discussion concerns research reactors, the largest of which is thousands of times smaller than a single power unit of a contemporary AES.

"We have proposed organizing interagency expert verifications of the safety of the installations that are located in Moscow. And such a commission has been created. It includes specialists from other cities around the country and representatives of the State Committee for Safety in the Nuclear Power Industry.

"Internal inspections will also be performed. Specialists from the IAEA have taken on the expert inspection of two research reactors in Moscow—our IR-8 and the same at MIFI [Moscow Engineering Physics Institute]."

"It is clear that this is not a matter of a day or even a month. But why not halt the reactor, at least so as to calm public opinion, until the results of the inspections are received?"

"Judge for yourself. Take just our IR-8. Medicines are made in it, aside from the research operations. Technetium in particular, which makes it possible to obtain an accurate diagnosis in the early stages of difficult, often oncological, illnesses. Some 100,000 such diagnostic drugs were prepared for 52 clinics in Moscow in 1989. And there are no alternatives for them. If we stop the reactor for a short period of time, to bring up the fuel load, for example, the physicians become indignant: 'What are you doing, people are waiting!' Do we have the right to deprive the patients of the hope of recovery?

"We moreover have to be engaged in the most serious manner in training people, raising the reliability and service life of the principal assemblies of power reactors and pursuing research on safety. Which is now being done at our installations. How can we stop the work? Wouldn't that be a new and tragic mistake for which we will have to pay later?"

"Please tell me in detail what could happen in the event of an accident at a research installation."

"We have done calculations of possible accident situations at research reactors. We determine—as at an AES—so-called 'projected' accidents, for which we envisage measures to reduce their danger and localize the consequences so that they are minimal and do not go beyond the bounds of the installation itself. We also evaluate 'non-projected' accidents, those which, according to the logic of things, should not occur. The probability of which, in other words, is very low, for example once in a hundred thousand years or even less often.

"There could be a rise in radioactivity therein that does not exceed the international norms for such incidents."

"Please elaborate: the residents simply don't notice it, or it does not affect their health?"

"More precisely, the rise in the background radiation will not be such as to require that any urgent measures be taken to protect the population. Do not forget, however, that the safety level is raised every year."

And so, our path is toward the IR-8 research reactor. I am offered a white smock to wear in front of a door with the symbol for radiation danger. I pass a device reminiscent of those intended for airline passengers. The display panel lights up: "Monitoring," then next "Clean." A few steps later, there are fewer instruments, they call them "gatekeepers" here.

They told me this story on the way. A woman was detained once in the passageway. She had come to the institute in the morning, and the dosimetric sensors were actuated—they detained her. They started to investigate

what was going on. It turns out that she had been at a clinic beforehand, where they had done a radioisotope test on her thyroid gland...

We pass the next keen sensor successfully and enter the so-called experimental room accompanied by the deputy chief engineer, A.F. Yashin.

"Here is where the neutrons emerge for nuclear-physics research," said Anatoliy Fedorovich. "This trap captures them, so the support personnel are insured against exposure."

A red-colored cylinder of stupendous proportions. It is clear without explanation that this is a reactor. We go up to the control panel.

Operating engineer Nikolay Vladimirovich Khmyzov is a hereditary nuclear-power worker. His father was one of the creators of the first Soviet reactor, and his mother worked there as well. Nikolay has a twenty-year "nuclear" tenure already.

"Tell me," I ask, "have you ever had to go to medical personnel in connection with deviations in radiation readings?"

"No, never. My daughter is growing up, she is healthy. So you can trace the genetics of three atomic generations... But the fact that the work requires enhanced attention and responsibility is accurate. We could [be compared to] air-traffic controllers in the level of emotional stress."

"I see you have an individual dosimeter on your smock. How many rems have you collected in all?"

"On the order of three or four hundredths of a rem a year. Roughly a thousand times less than, say, an abdominal X-ray."

And now in front of me is a small iron door. Behind it is the most frightening Moloch of the nuclear age—the reactor itself. A glass cover, under which is a tank filled with water. Ordinary distilled water.

There at the bottom, where the uranium rods rest so serenely, it seems, is a sky-blue luminescence. The incomprehensible beauty of a tamed, trained but wild animal. Even here at the cover the radiation is 100 times greater than the natural background level. So a little caution wouldn't be a bad thing.

The day shift has left for home, and we were able to pass through the sanitation post without delay. Dosimeters to monitor the shoes, hands, clothes...

By the way, one more curious novelty: "gatekeepers" have recently appeared at the street entrance to the institute. Any passer-by, without so much as a by-your-leave, as they say, can hold up an apple, say, and find out how radioactive it is. I held up my dictaphone, in any case—all was in order, the green light flashed.

My visit to the 20th-century "Minotaur" was ended. But, I emphasize, just my first visit. A topic so exceedingly troubling to Muscovites is of course not exhausted with that.

An interagency commission is working at the institute, as they told me. The experts have no right to draw any conclusions yet, for understandable reasons. But we promise that we will familiarize our readers with the final results immediately.

**Conversion Blamed for Worker Morale Problems**  
*904F0150A Moscow EKONOMIKA I ZHIZN in  
Russian No 16 Apr 90 p 5*

[Article by M. Ivanova and A. Matveyev: "At Labor Collectives: Desire for Change and Readiness for Them"]

[Text] When we talk about conversion in general and discuss it from the point of view of the economy, we mention primarily its benefits and the positive changes it will produce in the economy. But when the time comes to implement conversion in practice, labor collectives encounter tremendous difficulties, including even conflicts between workers and management. This is understandable. Their customary way of life is being destroyed, one when they did not have to be concerned with orders, profitability or sale of output, or to trouble themselves with careful computations of production costs.

The situation has changed dramatically. According to preliminary calculations, the Moscow machine building production association "Znamya Revolyutsii," for instance, may lose as a result of conversion orders equivalent to 2 years of production in the next 5-year plan period. Meanwhile, the enterprise has greatly overhauled its capital investment and now has up-to-date technology, modern precision equipment and an experienced, highly trained workforce. How to use this powerful potential better and to achieve adequate returns? One would think that the solution is obvious: to begin producing high-tech consumer goods. Consumers will benefit while the enterprise will earn a profit. Thus far, however, they have begun producing only baby carriages. This year they plan to make 90,000 of them and by 1993, 500,000. Our market needs baby carriages, too, and yet...

"The collective's problem is that we do not yet have a clear conversion program. This is why we are unable to see the future of our production clearly," said I. Rumyantsev, director general of the association.

"The problem is," explained chief engineer Ye. Borisov, "that our equipment is geared to producing a wide variety of parts. You can imagine what will happen if even one link in this complex technological chain is broken or changed. The difficulty is also that almost all main shops are part of the same technological cycle and are geared to the finished product."

"In addition," said V. Parfenov, the head of OTiZ [Technology and Orders Department], joining in the conversation, "civilian products, which we now want to make, must be highly profitable. We must not only maintain our old profitability levels but achieve greater ones to make up for the funds we used to get from centralized ministerial sources and to have money to keep the plant's social and economic services going. For this, we need from R3 million to R3.5 million a year. We now earn only R2 million. And we no longer can count on subsidies."

"It is also important that our salaries are not high compared to other, similar collectives. Judge for yourselves: the average at the enterprise is R240-R250 a month; workers at the main production shops who are paid by the piece make R350, and engineers and technical staffs R230-R240. People have begun leaving us for other enterprises and cooperatives. We are losing valuable specialists."

Indeed, the situation at the collective is very complex. Both management and workers understand that the solution should be sought in developing a fundamentally new approach to organizing production and labor, in improving individual incentives for better work and in making the entire collective responsible for its business performance.

Thus far, the shift to Model 1 has brought few changes in incentives and in the moral and psychological climate in the collective. Nor was the introduction of economic accountability at the main production shops very helpful. Actually, it was only partial economic accountability, since the compensation fund and material incentives were tied only to growth of production. Cost of production remained outside the plant's internal economic accountability system. Naturally, such half-hearted measures could not satisfy anybody.

The collective saw an opportunity to induce people to work better, to use freed capacities better, to introduce new products and to broaden the assortment of output in leasing, i.e., in switching the plant's units to that economic system. Both management and workers were unanimous in this view.

Differences arose only with respect to timetables and the order of shifting the main and auxiliary production shops to leasing. The collective of the mechanical assembly shop No.1 wanted to be the first to try this experiment. Why?

A. Salakhedinov, director of the mechanical assembly shop, said:

"In leasing, we see the only solution to the apparent impasse at our shop and at the enterprise as a whole. Last year, for instance, 90 workers quit. All were highly trained specialists paid rather well, but they decided to go to the cooperatives. This means that money was not at issue, but the climate at the enterprise was. Honestly, what is the attitude of workers and specialists towards using equipment and materials? They are indifferent, at best, and work without a spark. They lack responsibility and incentives."

"We began thinking how to save our collective. It is a decent collective, full of young, competent workers and specialists. But they get no chance to show themselves or display their initiative. We decided that leasing could change our psychological climate. We need independence in our actions and decisions. It is important that one gets satisfaction from work."

The general meeting of the collective supported the shift to leasing. People wanted changes and wanted to speed them up. It was good that the impetus for leasing came from below. New economic conditions would give the collective of the mechanical assembly shop room to maneuver as far as their resources are concerned, and to use its costly, highly productive equipment to full capacity. It could produce additional output, including tools and medical equipment. First samples of medical equipment have already been manufactured, and the customers were highly satisfied. After conversion, the production of such output would allow the entire collective to improve its financial condition. They could make other sophisticated products, as well.

The collective of the shop is ready to shift to leasing right away and people wonder why management is temporizing on this issue. Workers see delays as a sign of conservatism and revulsion to new work methods. Many think that managers and specialists suspect them of greed, fearing that they would get orders on the side, at contract prices, and make more money as a result—and that this is the only reason why they want leasing. But money is only part of the issue:

"I, for instance, make a good living now," said worker M. Vyunov. "Based on this alone, I should not necessarily want leasing. It would only cause extra worries. But the problem is that we all need leasing. The plant needs it, and the country does, too, to lead the economy out of the crisis and to give it a new lease on life. This is why I think that delays with leasing harm the collective: we are losing time and it will be very hard to catch up later."

What causes the delays? V. Butkina, director of the PEO [Production Economics Department], and chief bookkeeper N. Gorin explained it primarily by the fact that it is difficult to isolate production costs of the mechanical assembly shop and by the absence of internal prices at the plant. And there is no one around whose experience they could use. No similar enterprise has internal units shifting to leasing. They, too, keep books for raw materials, equipment and other costs for several shops at once. They do not make the final product, after all.

One can understand workers' impatience, of course. They are tired of waiting. But haste can lead to opposite results. In general, no one objects to seeing the shop shift to leasing. The party committee and its secretary N. Titov are active supporters of workers.

In our view, the problem is not the current conservative way of thinking, but the price we pay for the inertia of past years and insufficient use of economic accounting. Now, life forces us to count money and to think of costs and ways to cut them.

### **Change in Fundamental Role of Trade Unions Proposed**

*904F0100A Moscow TRUD in Russian 3 Mar 90 pp 1-2*

[Article by Doctor of Philosophical Sciences, Professor G. Alekseyev: "Our Conception of Trade Unions—What Should it Be Today?"]

[Excerpt]

[Passage omitted]

So, in devising a contemporary conception of trade unions, it is necessary to avoid formulated positions of a doctrinaire character. They should not be held up as political and ideological prescriptions.

Of course, the process of coming to understand the new role of trade unions is also hindered by a number of objectively present factors, like, for example, the fact that a general concept of socialism has not been devised which would conform to the present historical moment and a long-range perspective. Also in the developmental stage is the concept of renewing the party and the place and role of the working class in the system of newly unfolding relations between ownership and our society's new political structures.

Does this mean that under today's conditions it is impossible to arrive at a new conception of trade unions? Not at all. What should it be today? Here are what we consider only the most essential points.

First. Qualitatively new trade unions should be created. The purpose of their renewal is for them to acquire the status of a truly free and genuinely independent, self-determining organization.

Second. Full affirmation should go to the principle of free partnership with equal rights between the party and trade unions in defending and realizing the goals and tasks of the working class and workers as a whole. The party remains responsible for ideological and political work within trade unions, and the latter offer the party socio-political support. The most important thing is that this support be of a truly voluntary nature and that it be a fully independent act—not something ascribed to "party discipline" or the "requirements" of trade unions "laid down by regulations."

In this regard, the following lines, suggested in the course of the Plenum, should be added to the epigraph, which was taken from a draft of the Central Committee Platform: The party repudiates its earlier conception of trade unions as a driving belt or connecting link between the CPSU and the broad working masses; and it decisively repudiates the administrative-command approach in mutual relations with trade union organizations.

Third. The virtual governmentalization of trade unions, which occurred during the formation and functioning of an administrative-command system, must be reversed. In place of familiar formulations such as "the trade unions take part in," "taking into account the opinion

of," or "by agreement with," a fundamentally different formula for mutual cooperation between trade unions and the socialist government should be established. It would proceed from the total and absolute "degovernmentalization" of trade unions and would presuppose a multiplicity of organizational and political forms of interaction between them and various governmental bodies. This interaction could take the form of voluntary cooperation, partnerships with equal rights, and (in some cases) strong and firm opposition. In the latter case it is essential that the trade unions have the right to a "veto" as well as the right to use methods like presenting memoranda and organizing referenda, meetings, demonstrations, and—in extreme cases—strikes.

Fourth. The original, innate role of trade unions—that of defender—should be fully restored. And this should not simply be the main function: it should be the single function, the very essence of all of the trade unions' work. In connection with this the unions should be fully freed from their "managerial" and "administrative" functions and duties.

The defense of the professional, labor, economic, and democratic rights and interests of workers and their various socio-professional groups, based upon the principle of social justice and with the aim of creating a well-rounded and developed identity—this is the social purpose of trade unions and their essential function in a socialist society undergoing renewal.

Fifth. New unions should be created along organizational lines which fundamentally differ from earlier ones:

—The local trade union organization should acquire through actions, not words, the status of a genuine foundation or basis for an entire trade union structure. That means it should have the right to organizational and financial self-determination as well as the right to a decisive voice in the creation of supreme trade union structures and in determining whether they are needed and effective.

—While continued attention is paid to strengthening unity, organizational and structural pluralism should be encouraged in the trade union movement. This would mean the creation of the most varied associations of this or the other group of workers according to their socio-professional interests; the creation of amalgamations of these professional associations, that is, of unions themselves; the organization of various types of federations (unions and professional associations) on the basis of industrial-branch as well as regional-territorial (republic, oblast) factors. Instead of the strictly centralized (in accordance with the principle of democratic centralism) all-union trade union organization, a lawfully created federation of USSR trade unions should be created on the basis of free entry into the federation for industrial branch unions as well as regional-territorial (republic, oblast) trade union associations, and associations created on

the basis of various forms of ownership, for example, cooperative, mixed (aided by foreign capital), etc.

This is our present-day and long-range conception of trade unions.

In the meantime, the trade unions are taking the first steps towards real and fundamental restructuring of their functions, the forms and methods of their work, and their organizational structures. Ahead is a large field of difficult work, quests, and heated discussions. But that which has already been done, particularly on the basis of the decisions made at the VIth and VIIth Plenums of the VTsSPS [All-Union Central Council of USSR Trade Unions], towards a qualitative renewal of their role (and including the work the unions are doing in the new Soviet Parliament towards drafting and passing laws which touch upon vital interests of workers)—all of this shows that finally a force is entering the arena of the socio-political life of our nation which is striving for self-determination and independence, and which is able to actively and effectively defend the interests and rights of the working person.

#### Co-ops Determined to Fight Bureaucratic Pressures

904F0095A Moscow IZVESTIYA  
in Russian 21 Feb 90 Morning Edition p 2

[Article by A. Protsenko: "Feathers Fly over the Cooperative Movement, or Why Slaughter the Goose that Will Lay Golden Eggs?"]

[Text] The beginning of this year was marked by two "extraordinary" occurrences for cooperative entrepreneurs. On January 27 an extraordinary session of the Moscow Cooperative Union took place. Following that, on February 17, an extraordinary conference of the USSR Union of Cooperative Associations met in the capital. The same issue was discussed at both meetings: the crisis in the cooperative movement caused by the arbitrariness of central agencies and local authorities, which are violating union legislature, particularly the law "On Cooperatives in the USSR."

First a few examples. In the last year in Latvia cooperative owners have already issued consumer goods at a value of 330.6 million rubles—a little over one hundred per capita in the republic. The quantity of production here has even resulted in new benefits: as a result of the struggle for the buyer's wallet that has emerged, towards the end of the year prices for cooperative goods—clothing, knitted wear, shoes, haberdashery—were lowered by 25 to 30 percent.

An example of a different kind is also interesting. In Cherkess (Stavropol Kray), where 13,000 people were unemployed, cooperatives created 8,000 jobs in the last year and provided 70 million rubles worth of work and services. People had earned good money and had already been able to turn their attention to the needs of the city as a whole. They donated 800 thousand rubles to the

construction of a trolley line and half a million to the construction of a House of Children and hospital.

Here is a third example. The Baumanskiy rayon of Moscow was only able to seriously correct its financial standing through its benevolent relations with cooperative entrepreneurs. In 1989 payments by cooperatives into the budget exceeded the originally projected sum by 37 times and made up 16 percent of the income for the entire rayon.

Who is hurt by this? I have no idea. But obviously someone is, because since the second half of last year, it is as if in many regions of the country the call had gone out, "Crush the petty private owner!"

And things became difficult for the cooperative entrepreneurs.

Here are only a few of the addresses named in the document prepared by the USSR Union of Cooperative Associations for Chairman of the USSR Supreme Soviet M.S. Gorbachev. In the Krasnodar Kray the activities of 677 cooperatives were practically brought to a halt because of one July decision made by local authorities. There is something like open hunting season on the ones remaining. (The readers of *IZVESTIYA* know about this, if only from the article "Crucibles" in issue No. 43 of our paper.) In Uzbekistan, in violation of the law, a list of activities in which cooperative entrepreneurs are forbidden to engage has been distributed. Specialists believe that this will lead to the liquidation in the republic of 40 percent of all cooperatives and leave 72 thousand people unemployed. And this is in a region that is suffering from unemployment, a condition that has already become one of the reasons for massive disturbances. Analogous steps have been taken with respect to the cooperatives in Kazakhstan, Belorussia, the Ukraine, Bashkir and many other regions. At the end of last year, in December, the Moscow city soviet passed its "Provisional Regulations on the Procedures for Organizing Cooperative Activities in the City of Moscow," in which at least ten points are not based upon law or directly contradict the law "On Cooperatives in the USSR." The expected results, if the rayon soviet does not resist, will be the closing of one third of the cooperatives and the lowering of cooperative production volume in the present year by one billion rubles.

On the whole, specialists predict that this entire complex of measures will lead to a complete end to growth in cooperative turnover in the nation and even to a reduction in the volume of work and services performed by cooperative entrepreneurs, as early as 1990, by no less than 10 billion rubles (i.e., by one fourth). In general, my cooperative has not even tested its wings before feathers have begun to fly.

Is this stupidity, or a conscious policy on the part of an administrative-command system which is trying to nip a market economy in the bud? This is the question asked by delegates of the Moscow session and participants in the all-union conference. But since these questions had

to be addressed, in effect, to themselves, the answers and suggestions were entirely radical. They went as far as proposing, first of all, that the cooperative movement immediately become politicized and move quickly to create its own political party. And second, they proposed organizing acts of civil disobedience, the most important of which would be boycotting tax declarations.

Incidentally, the cooperative entrepreneurs received the idea of a boycott coolly. It was clear to all of them that in areas where the authorities saw in them representatives of a new sector of the economy and did not disturb its normal development, a boycott was simply out of place. And in other localities such an action would eagerly be used as an excuse to deal with "those damn petty private owners who don't want to share their millions with society."

As far as politicization goes...it cannot be avoided, either in business or in any other socially important matter. But does that mean that a separate party should be created? This is what, for example, USSR People's Deputy G.Kh. Popov said at the conference. In order to defend democracy and expedite the transition to a normal economy, cooperative entrepreneurs must put programs into action which would bring large sectors of the population over to their side. There are tens of millions of people in the nation who not only live below the poverty line but are unable to take part in the new economic relations due to old age or other reasons. The programs should see to it that at least their earlier standard of living is maintained. In the course of perestroika a large reduction in the number of workers at state enterprises and various establishments will take place. New jobs must be created for them with prior retraining. Otherwise a sharp increase in the effectiveness of production in individual sectors of the economy will give rise to explosive tendencies in society as a whole. Soldiers who are released from the army as a result of reductions in the armed forces require special consideration. If decent jobs are not found for them, they could end up in the reserves of conservative forces. And so forth.

This deputy was by no means attempting to "ban" cooperative entrepreneurs from participation in the nation's political life. But business circles could play a special role here, as they do in developed Western nations with strong democratic traditions. For example, they could bring in their own team of highly qualified consultants—lawyers, economists, and sociologists—who would be ready when needed to give members of the Parliament well-reasoned advice and their prognoses on the effects of passing one or the other law. They could finance scientific projects and research that would allow for predictions on the development of this or the other social process in the nation. In other words, they could be involved in real politics and influence the situation taking shape.

All of this is becoming particularly important now, on the eve of the elections in republic and local soviets. It is already clear that serious renewal will take place in their

ranks and that new people will come into power who want to make many changes but who by no means always have the knowledge or simply the information that is needed.

The cooperative entrepreneurs listened, agreed, and thought about their own concerns: how to fight today's administrative-command system and how to bring an influence to bear upon the bureaucrats who exercise arbitrary control and have sat too long in executive bodies. The wall of bureaucratism that was going up in front of them seemed indestructible, and any demands or protests seemed useless. And even the conference, which many attended with great hopes, already seemed so much empty talk.

As strange as it may seem, cooperative entrepreneurs have turned out to be the most helpless people in the nation today. Alas, the building of a law-governed state in our nation today is sadly accompanied by violations of existing laws. The pretext is used that they were passed during the period of stagnation, or were drafted in the spirit of that period, and therefore did not answer the requirements of life and contradicted the people's will. Although no one ever asks the people what they want on such occasions.

But the end of the extraordinary conference of cooperative entrepreneurs seemed all the more unexpected. The USSR Minister of Finance V.S. Pavlov arrived somewhat late. And, as they say, he agreed "straight off" that the rights of cooperative entrepreneurs were being infringed upon and that the development of a market economy in the nation had met with no small difficulties and even with direct opposition by central and local bureaucracies. Why? "Very often," the minister explained, "these people have doubts. They ask themselves, Will it be around for a long time? Is it needed? And some of them simply think that it will do them harm, and therefore it should be nipped in the bud."

And truly, the cooperative entrepreneurs applauded no one so loudly and amiably as the director of an agency which more than all of the others was responsible for their troubles and misfortunes. They applauded him merely for these honestly spoken words. And when the minister admitted right away that by no means all of the instructions by the Ministry of Finance help matters and proposed that on Tuesday, February 20 they gather a cooperative working group to examine the entire packet of documents that regulate the interrelation between cooperatives and the finance system (this brought on a thunder of applause), it seemed that "the light at the end of the tunnel" had finally gleamed for those who had gathered at the movie theater in the hotel complex Izmaylovo. It suddenly seemed that the administrative-command system was not monolithic, and that there were new people with whom one could and should find a common language.

It is true, all of this was nothing but promises. But at the same time it was the beginning of a possible dialogue, which in any case was more productive than confrontation.

The minister continued to speak to the auditorium. He proposed that the Union of Cooperative Associations itself consider which of its members were trustworthy and which were temporary fellow travellers in the cooperative movement. For those who have entered the new economy with serious intent and on a long-term basis, one set of conditions was possible, and another, tougher set of conditions could apply for the "free Cossacks." The whole question is one of whether the Union will be willing to take responsibility for its members.

#### Practice of Worker Awards Denounced

904F0097A Moscow TRUD in Russian 23 Feb 90 p 2

[Article by Valentin Safonov: "Dressing Up"]

[Text] I am sure that no state has as many awards and people receiving awards as ours—we are the undisputed leaders in this area. There are decorated grain-growers, cattle-breeders, inexhaustible salespeople and secretaries of party committees. There are cohorts, legions, hosts of order-bearers. But as before, the harvests are low, meat is traditionally in short supply, and salesclerks are as rude as ever. And I don't want to mention the rest.

I remember how as little urchins we ran down the road in the hungry and hot summer after the war to meet the victors. The soldiers were usually wearing faded, well-worn soldiers' blouses and washed-out riding breeches. But we didn't care about clothing: the gleam of gold and silver official honors and medals blinded us and clouded our imagination.

With age I learned an indisputable fact: back then even the soldiers' blouses whitened with salt told more about the pressures of a soldier's toil than those awards.

As a little boy I heard a strange, not fully comprehensible word: "raznaryadka" [the practice of awarding official honors and medals for special achievements or performance]. The title of Hero of Socialist Labor had been conferred upon a pig-tender from a village on the remote outskirts of the rayon. And we, the senior pupils, went to the kolkhoz to have a look at our role models, led by our teachers.

We should not have gone. Beyond the gate that had been shaken loose and was coming off its hinges, the pig-tender's estate stood before us, mired in mud. The various kinds and qualities of piglets did not resemble "model" livestock, even by outward appearances. "Maybe we have the wrong address?" inquired our teachers. But the answer was no, there was no mistake. The title of Hero had been awarded to two people in the rayon, who had received Stars: the raykom [rayon party committee] first secretary and her: a pig-tender was precisely what was needed.

## LABOR

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The Labor Heroine did not come to meet us, pleading a sudden illness. Later I saw her in the presidia of various meetings, and amidst the loud-voiced talkers—the rayon Ciceros—she clearly felt ill at ease. Not long ago, after almost four decades, I inquired about her whereabouts and what had become of her. “She’s taken to drink,” I was told.

God forbid you should throw stones at this woman! She worked just as the majority of kolkhoz workers did in those trying times: no better, but certainly no worse than they. At that time one did not dare to dream about mechanization on farms and could not imagine “thousanders” [those achieving output of a thousand units] in dreams. There was a neverending shortage of fodder. The beautiful life was something that only existed on the movie screen, where Kuban Cossacks danced jauntily. It was not heavy toil which broke the woman who tended pigs—it was the sudden burden of undeserved fame.

One thing is curious: during the war the laborers on the home front were not indulged with awards. Even today the commanders of the celebrated women’s tractor brigades (and during the war there were more than 150 in Ryazanshchina) have nothing to attach to their holiday blouses. Dar’ya Garmash, pioneer of the movement, did not receive the title of Heroine until 26 years after the Victory. And then the awards came rolling in: for the results of the five-year plan..., for the results of the year..., for particularly outstanding achievements in...

The worse people worked, the more they were rewarded. That strange word “raznaryadka” no longer seemed strange to anyone. Everything was subject to “raznaryadka”: the amount of awards for a rayon; the list of decorated, with an obligatory preponderance of awards going to party members; age; and social affiliation. And official honors and medals were even divided up by gender: a certain number went to peasant men and a certain number to (excuse me) peasant women [the pejorative “baba” is used here]. This is no joke, although it is a curiosity!

I made a calculation with pencil in hand. In the Sarayevskiy rayon, where I am from, we have had seven or eight raykom party secretaries in the last four and one-half decades. Two of them were decorated with Orders of the Red Star. In a time of general difficulty, they were in charge for more than thirty years in the rayon, and they left unpleasant memories. Their unrestrained ambition, passion, and arbitrariness caused people to flee the village: within a short period of time tens of thousand left their homeland. So what good are Heroes? But according to the “raznaryadka” process...

Why am I suddenly bringing this up? Isn’t it a bit late? The decision has supposedly been made already at the highest levels of authority to be sparing with official honors and honorary titles and not to squander them, covering the road with massive awards, subduing the peal of anniversary celebrations. But practice—insidious practice—has proved more forceful than documentation. The line “in

connection with the anniversary of the year...” has disappeared from ukases, but anniversary award ceremonies exist as before, along with many others.

From a purely humane perspective, I don’t begrudge them...let them have their awards...(It’s clear there have been truly fine people among the masses who have received awards). But a medal has a reverse side to it. The practice of “raznaryadka” has cheapened not so much the awards themselves, but labor and people’s attitudes towards it. Those who were undeservedly rewarded knew that behind a shield of sovereign metal they could live their lives comfortably and without taxing themselves. And those who were unfairly passed over no longer wanted to put all of their effort into work. And their surroundings egged them on: you break your back, you stoop over your work, and the other guy gets the rewards. Corrupting people with awards—what could be more blasphemous?

When phrases are valued over actions, then those who come to the fore are not the toilers, but the shouters with throats of cast iron. They love honors, awards, and applause. In the old Russian army there was a nice custom: the company, not the company commander, would determine who would receive the St. George’s Cross after each victory. The veche [assembly] of soldiers would sometimes award the St. George’s Cross to a colonel or even a general. For experienced swordsmen no distinction was held higher or dearer.

Let me add something about today. What if one were to bring together the workshop, factory, and kolkhoz on this matter? If they said “Ivanov deserves it,” then he would be decorated. And it wouldn’t matter who he was, this unknown Ivanov. He could be a lathe or combine operator, a factory director or kolkhoz chairman. He has served the people, so he is rewarded.

And there’s another prescription: working not out of fear, but for one’s conscience, as they do, for example, in tiny Holland. There, on unsuitable land surrounded by seas, they produce fantastic harvests, and their livestock’s weight gain and milk yields are unparalleled. Those who are knowledgeable confirm that the agrarian minister there is not burdened with official awards and medals. From our parochial view of things it seems wild and wonderful—not a single decorated worker, and they have products and goods coming out of their ears. These Dutch are a strange bunch...

Incidentally, a word about ministers. A meeting of our nation’s Council of Ministers was shown on television. And our very own ministers, from our Fatherland, were complaining like children, heaping their misfortunes and squabbles at the prime minister’s feet. Help us, Nikolay Ivanovich. Direct and command us. The helplessness and dependence of several of the government’s men were striking, if not devastating.

My thoughts just ran to Gavrila Romanovich Derzhavin (by inertia, perhaps). He also held high government posts

and received many honors and distinctions in his life, as the inscription on the monument to him tells us. Whoever has been to the Novgorod kremlin has seen it. All of the orders he received are listed, along with all of the ranks and positions he held. But they neglected to mention that he was a poet. Yet we today only remember one of his titles: Poet. It is his work to which we render homage.

Our ministers do not write poetry, or at least they don't publish any. But they do receive decorations, as Derzhavin did, for government service. Is it their work they are rewarded for?

Who will remain in the memory of our ancestors, and for what?

**ORGANIZATION, PLANNING,  
MANAGEMENT**

UDC 658.511.4:621:33

**First All-Union Congress of Machine Builders  
Held****Silayev Speech**

*904G0027A Moscow STANDARTY I KACHESTVO  
in Russian No 2, Feb 90 pp 4-8*

[Report by I.S. Silayev, Deputy Chairman of the USSR Council of Ministers: "Machinebuilding Technology: Status of and Ways for Increasing Efficiency During the Era of Radical Economic Reform" (published in abbreviated form.)]

[Text] Our congress is being held at a complicated time. Development of the country and its economy has entered a qualitatively new stage of perestroika. A Soviet parliament of a new type is being born, a new political platform is being implemented, the system of an economic mechanism is being formed, and the principle of economic self-sufficiency and self-management of laboring collectives is being put into practice.

All this is at the essence of the start of a restructuring of the party that is being completely supported by and absorbed into the life of the Soviet people. The thought of all work in this area is to return the economy to the man and to create working and living conditions for the Soviet people that are worthy of our era. This refers primarily to foodstuffs, housing, medical care, nature conservation, and an upgrading of education, science and culture.

Successful solution of the social tasks that are contemplated is linked inextricably with the utilization of scientific and technical achievements in all branches of the national economy, primarily in its machinebuilding sector, which includes both civilian and defense machinebuilding, and in branches other than machinebuilding that have enterprises that produce machinebuilding equipment. This sector is assigned a special role in developing the country's economy.

In order that scientific and engineering progress may enter our life as quickly as possible, it is necessary primarily to choose correctly the priority directions of its development and to balance them rationally.

Today, as world experience indicates, one of these directions is the introduction of progressive technological processes. It is technology that connects the links in the science-and-production chain.

The newest technology of our time is the national wealth of any country. And this is not accidental. For the past four centuries the world process of the industrial production of machinery and equipment has tended toward an

accelerated transition from the simplest multiple-purpose technologies to complicated technologies. The classical principle of obtaining parts by successive machining of blanks with cutting tools is being replaced increasingly by three-dimensional deforming with a small number of conversions. General-purpose machine tools are increasingly giving way to specialized technological lines and complexes which, as a rule, have been automated and are highly productive.

High achievements in saving energy and resources are typical features of this improvement in machinebuilding technology.

It must be noted that in recent years the scientific bases of the traditional technological processes in domestic machinebuilding have been developed considerably. They include development of the theory of productive systems, the problems of optimizing technological methods of machining and the forecasting and synthesizing thereof, which allow the nature of technological operations to be changed qualitatively.

Machinebuilding technology has been enriched by a large number of progressive solutions that are associated with a considerable rise in the precision of machine parts and by the automation of their manufacture. Basically new technological solutions have enabled such major areas in machinebuilding as welding, hardening of the working surfaces of parts, powder and granular metallurgy, instrumentmaking, semiconductor equipment, microelectronics, optics, and others to be developed and raised to a new level. What is more, the traditional technological conversions have been changed considerably. The precision of fine processing, especially at the preforming facilities, and the rapidity of technological processes have grown substantially. New technologies that use high-density energy—laser and plasma energy, electrophysical and electrochemical energy, and various sorts of pulsed technology, and so on, which once were exotic, have now become everyday.

General ideas on automating production that have been developed in the country have found use in many branches of machinebuilding. Developments in the field of the scientific bases for devising technological processes for the flexible automated production of parts are going on intensively.

Trends in turning the whole existing arsenal of technologies toward improving processes and increasing the scale of output of goods for the national economy's social sphere have been noted. Thus, in 1990 consumer goods output by branches of civilian and defense machinebuilding increased by more than 30 percent. These are unprecedented times and they require the assimilation of new mass-production technologies.

In assessing the status of machinebuilding's technological base as a whole, it must be noted that many unresolved scientific, practical and organizational problems have accumulated that slow the development and reequipping of the scientific, engineering and production

potential of the country's machinebuilding complex and its attainment of the level of modern achievements.

The intensiveness of materials and energy and the expensiveness on the whole of many of the technological processes that are used in practice are very inferior to world counterparts.

Thus, the share of forgings in total pressworked blanks consists of up to 30 percent in our country, 5-7 percent in the U.S.; the share of output of precision blanks made by progressive plastic-deformation methods is 15 and 50-60 percent; the share of castings made of high-strength castings is 2-5 percent in the USSR, 20-21 percent in the U.S., 19-20 percent in the FRG, and 26-27 percent in Japan; the use of high-speed cutting machining in total machining is 3-4 percent for us—10-12 percent in the U.S. and Japan; the share of tools with nonresharpenable hard-alloy tips in total output of metalcutting tools is 2.6 percent for us, 20-25 percent for the U.S., the FRG and Japan; and the output of tools with wear-resistant coatings is 8 percent for us, 55-60 percent for the U.S. the FRG and Japan.

We add here also preservation of the environment, to which machinebuilding previously did not accord proper significance. It is known that today this is one of the main social problems in the world, and many countries have invested substantial efforts to make technological processes ecologically clean. And here the main burden falls on the manufacturing engineers. It is they who today are concerned about how to reduce the amount of discharges, how to stay within the norms, and how to avoid the processes that make these discharges. Here, in essence, is the main goal of our activity.

There is still another major problem of machinebuilding technology—the universally existing principle of training manufacturing engineers on existing equipment. This leads to poor utilization of the equipment and inflicts major economic harm. Scientific and technical progress and life itself dictate the need for realizing an optimized technological process. And special equipment is required for this purpose.

The problem of developing technological processes based on engineering principles, that is, with specialized collectives that optimize production processes in accordance with engineering-economics parameters and endow finished technological complexes with an optimal set of equipment in turnkey style and with the required trained personnel, has come up on the agenda. Many Western countries have been going this route confidently for a long time now. Unfortunately, this principle still does not exist for us in practice.

Machinebuilding's production efficiency is also being hampered by the technological and age structure of the equipment pool.

The continuing gap between design and technology, which leads to increased labor costs, complication of the

equipment, and increase in energy and materials consumption, reduces manufacturability considerably. At the same time, one can cite many interesting examples where the collaboration of designers and manufacturing engineers has brought very effective results.

There are serious disproportions in the degree of automation of technological processes. There are definite achievements in automating research and experimental-design operations, manufacturing parts by means of welding and assembly operations, and applying electronics equipment. At the same time the assembly process in general, but especially in electrical equipment, instrumentmaking, general machinebuilding, and machine-toolmaking, not to mention auxiliary and repair operations, and so on, is being performed manually.

A serious deficiency is the low level of the technological operating properties of products. This results from the fact that for a long time our manufacturing engineers did not worry much about customer interests or operating equipment.

It is known that, in the development-to-production-to-operation cycle, from 90 to 95 percent of all expenditures are made on operation. One can tell from this the colossal harm that is inflicted on the country's economy by low operating manufacturability.

Many of the country's problems are associated with low quality of output. Scientists and designers have been sharply criticized for this because of poor designs, labor collectives because of poor work performance as a result of deteriorated discipline and a low skill level. All this is well known. But how does a former factory manufacturing engineer dare to assert that the quality of performance of any operations depends by 90 percent or more on the quality of the technological process, and that means, on the manufacturing engineer.

Obviously, thought should be given to the role that we actually assign to manufacturing engineers in the scientific and engineering process and in our work as a whole, and what the role is that manufacturing-engineering scientists, manufacturing-engineering developers and ordinary manufacturing engineers play in solving many problems, and what social and material position the profession of manufacturing engineer occupies in our society today.

Yes, the whole country knows such outstanding scientist-manufacturing engineers as Academicians B. Ye. Paton and V. I. Trofimov, Corresponding-Member of the Georgian SSR Academy of Sciences T. N. Loladze, scientist-manufacturing engineer and Corresponding Member of the USSR Academy of Sciences P. N. Belyanin, who is well known in machinebuilding, Doctor of Engineering Sciences Yu. I. Zvezdin, and many others. Manufacturing engineers in defense machinebuilding made an enormous contribution to creation of the Buran

space system in collaboration with nondefense machinebuilding, process-engineering chemists, metallurgists, and others.

But still. Let us take, for example, mechanical machining—the most widely used technological process in machinebuilding. Today everyone agrees that even to this day only 5 percent of all operating time is spent on active work on the part. All the rest of the time is spent waiting for movement into position. Academician L. N. Koshkin rebelled against this and did much to introduce a new principle of mechanical machining—the rotary conveyor principle, which enables productivity to be raised tens and hundreds of times. Naturally, this type of technology has its definite place, its sphere. But there is little that we are doing to introduce this highly efficient principle where it can be used. Unfortunately, many manufacturing engineers display steadfast conservatism here.

Can one speak today about the high manufacturability of such equipment as a machining center which still activates one or two spindles? It happens that one or two parts are being machined, while tens of tools in the magazine await their turn. And indeed the cost of modern machining centers comes to a million rubles. In essence, this is mothballed human labor. Consequently, other, more effective types of equipment must be sought, and some kind of new and, perhaps, revolutionary approaches must be sought. The equipment should be more efficient and its cost should correspond to the increase of its productiveness.

It must be noted that searches for new solutions are being made. It is known that innovators of Moscow's Orgstankinprom [State Industrial and Experimental Design Institute for Organizing the Machine-Tool Making and Toolmaking Industry] of USSR Minstankoprom [Ministry of Machine Tool and Toolmaking Industry] propose certain original and more efficient solutions and directions for developing technologies. However, the development processes are proceeding quite slowly. And this is because the enthusiasm of the innovators has not been supported either organizationally or economically. Obviously, Minstankoprom should extend every possible assistance to this collective.

A critical evaluation of the contemporary state of machinebuilding does not mean that our country does not have at its disposal technological personnel. No, as before, we are rich in talent and undoubtedly rich in talented manufacturing engineers. I have named some of them. One cannot help but recall the outstanding contribution to world science and the practice of metallurgical machinebuilding by A. I. Tselikov, Leningrad manufacturing-engineering scientist, doctor of engineering sciences and professor; and S. P. Mitrofanov, who created a whole school of ganged machining of parts, whose use abroad has started.

I am confident that we shall have new, bright names. And even now one should think about the title of master

process engineer. Why should there not be a master process engineer, one who has opened up a new field and put it into practice? These titles should be awarded not to officials but to outstanding specialists.

However, brilliant people, even if there are many of them, cannot solve all problems. An updated technological school which would raise our domestic machinebuilding to a new level is needed. Perestroyka is the process of updating. Technology is also a process. Consequently, harmony and correspondence with the problems of restructuring the creative efforts of the army of manufacturing engineers are necessary. But only united efforts, using advanced experience and working jointly on the new technologies, can cope with this task.

World experience has formulated the basic trends in developing machinebuilding technology. In the modern era these trends have been occasioned by: a continuous increase in the diversity of forms, products mixes, and amounts of output produced; the complexity of machinebuilding products and increase in their adaptation to electronics; a reduction in the time spent preparing for the production of new machines; an intensification of specialization and an expansion of the scale of cooperative effort; expansion of the mix of technologies and constructional materials; a rise in the flexibility of all production structures; and growth in scale of the application of electronics and automation to production.

Both the further improvement of traditional and the scale of assimilation of new, highly efficient technological processes, using high energy densities, which have been greatly developed in world practice in recent years, are strategic areas for solving these problems in domestic machinebuilding. The development of such science-intensive technologies will require deep and narrowly special knowledge in numerous areas of modern science. Specialists armed with such knowledge must be united in solving the practical tasks of producing specific types of equipment. The development of ganged technological processes, which now also require the collective wisdom of various machinebuilding manufacturing-engineer specialties, must also be approached from these same standpoints.

It would seem that the possibility of the selection and wide-scale copying of well worked-out technologies at machinebuilding enterprises of various profiles has appeared. However, this process occurs extremely slowly. Existing outlays for the machinebuilding structure, where the very same basic technological processes are, in essence, being developed independently in each branch, confirms this once more. And poorly aligned economic relationships among the ministries only worsen the situation.

Because of this, this situation, which has prevailed today after a very earnest basic regrouping of forces in our machinebuilding complex, when there are now four instead of eight ministries, must be looked into. This is not an end in itself, it is a far-reaching strategy. The

machinebuilding branches have much in common, and a consolidation of efforts is extremely necessary. The lack of consolidation of machinebuilding-production manufacturing engineers is a major neglect in domestic practice that must be overcome.

Grave attention must be paid to restructuring technological processes that are associated with the restructuring of the enterprises themselves. Today, a trend toward a division into smaller entities, and the creation of small and medium-sized enterprises, not to mention new forms of organizing production, and even new forms of ownership, are being implemented. It will not be within the powers of small enterprises and cooperative production arrangements to develop their own modern technologies, modern processes and modern equipment. And technological organizations that are outside the regular agencies, which work on the principle of developing turnkey technologies, which, as was said earlier, is being used widely throughout the world, can play a prominent part.

And so, a consolidation of forces is needed for solving the many problems that face our manufacturing engineers.

The First All-Union Congress of Machinebuilding Manufacturing Engineers is a concrete attempt at such consolidation. The congress should develop measures for increasing the effectiveness of technological science and coordination of work in the area of creating and using new technologies and of uniting the best efforts of our country's machinebuilding manufacturing engineers.

As we know, machinebuilding is entering the Thirteenth Five-Year Plan as a priority complex of the national economy. Economic, organizational and legal-norm measures that are based on further expansions of innovative processes which have been started in machinebuilding and the successive implementation of radical economic reform and of democratic principles of management lie at the basis of its development.

In so doing, by the end of the next five-year plan: changes must be effected in the proportions of conversions in machinebuilding production by way of increasing the share of equipment for obtaining precision blanks and by performing finishing operations, with a corresponding reduction in the share of metalcutting equipment for rough machining.

Here it should be recalled that today, out of the 22 million tons of all kinds of metal and semifinished products, 7 million are still being converted into chips and shavings. Thus, we have at hand the creative work by metallurgists and, if you will, the destructive work of the machinebuilders. We must work actively on processes that will lead to a gradual reduction in metalcutting volume.

Updating of the active portion of machinebuilding's fixed productive capital must be raised by an average of up to 15-20 percent per year. Up to now the designated

service life for the basic types of equipment is 13 years, while abroad it is from 2 to 3-5 years, or a maximum of 7 years.

We consider that the task of completely replacing basic technological equipment during the next five-year plan to be within our powers. Of course it will be difficult to cope with this task all alone, but we have in mind integration not only with our defense complex and with other nondefense branches, but also with foreign partners.

An important question is the creation of a wide network of well-equipped flexible production facilities for manufacturing components and systems for general machinebuilding use, including interindustry production facilities not subordinate to an operating agency, both state agencies and those founded on the new forms of economic activity—lease or cooperative. This involves a conversion to European standards and norms, which will enable the basis to be laid for solving rationally the problems of servicing the final output of domestic machinebuilding and of the compatibility of components for general machinebuilding use with the requirements of the foreign market.

Work must continue on change in the structure of output of the machine-toolmaking output by way of increasing by 1995 the production of its progressive types, including automated means for finishing operations and forging, pressworking and casting equipment with NC. Work in this area is going on very slowly and serious complaints should be made against machine-toolmaking industry enterprises. Unfortunately, despite the shortage of these types of equipment, plan tasks regarding them are not being fulfilled systematically.

Leading foreign companies should be enlisted more widely to participate in reequipping the machinebuilding production apparatus by organizing joint consortia, industrywide-type associations, and enterprises, including the creation of progressive technological equipment for making precision blanks and performing precision-finish machining of articles, microelectronic components and control systems, new constructional materials, and assembly, monitoring-and-measuring and test equipment, as well as means for automation.

I would like to call attention to the necessity for having a program of international integration in the area of scientific and engineering progress. The search for a partner should be rational and purposeful, and it is necessary to search for mutually advantageous collaboration in the area of technologies, using our own intellectual potential.

Many of the problems of the broad introduction of modern technologies undoubtedly will be solved by government efforts. But a mutual contribution of all interested parties will be required here.

For many years, decisions and decrees from the highest level, which recommended and obligated and required

that machinebuilding manufacturing engineers implement everything that is better, everything that has been achieved, were adopted. And there were such achievements. But in the previous system, we will speak of command and administrative control, this still did not get further dissemination.

Today conversion to the principles of self-financing and economic accountability, not only of civilian machinebuilding but also of the defense complex, creates, it seems to me, favorable conditions for collaboration. What is more, it was started without intervention and commands from the top. Some enterprises are already concluding agreements in very interesting areas in the joint introduction of technologies. And this is not simply the transfer of drawings or information, but joint developments and joint manufacturing. It would seem that, given such collaboration, modern achievements of the defense complex will be very quickly introduced into all branches of machinebuilding.

A few words about the state of equipping our developer manufacturing engineers with the appropriate equipment. Definite successes have been achieved recently: substantial funds are being invested in experimental and test bases for the developers. Thus, while during the preceding five-year plan about 300-320 million rubles of capital were invested in developing and equipping the bases, this year this figure has exceeded a billion. But even this, apparently, is not the limit.

The most earnest attention must be paid to equipping technological centers. And here is why. The opinion has prevailed that if a good machine tool, press, or some other kind of technological equipment is developed, then the technology problem has been solved. In my view, the technological process is still primary, the equipment is provided by the idea. This is precisely why it is necessary today to greatly strengthen research and searches for the creation of new technological processes. But for this purpose, experimental sections for machinebuilding technology are needed, not only at technological institutes but also at enterprises.

So a very important task is that of reinforcing the development of technological processes with new developments of the most diverse types of technological equipment.

It would seem that microelectronics, where the efforts of manufacturing engineers and design developers have been successfully interwoven, can be named as a model of such an approach. Had it not been for the modern technology for producing components and other elements for microelectronics, then today there would not be such high achievements in the area of electronics.

Naturally, the quality of the experimental base will enable us to reduce also the cycles for preparing for production, which, unfortunately, are growing today.

The close collaboration of manufacturing engineers and designers can also have an influence on the cost of the

equipment being created. If the designers and manufacturing engineers collaborate well, then the mass of completely justified reproaches about prices corresponding to neither the technical nor technological content will pass away. Yes, our equipment should be complicated, but its cost in terms of minimal expenditure of human labor should not rise.

And so, when studying problems of updating the active portion of machinebuildings fixed production capital, the central problem of engineering policy arises: on which technological processes is the rate set when the policy is being formed; and what types of technological equipment should go into updated production? These questions are so important that no mistake should be made. Even the consultants of the engineering and technicians society do not manage without deep analysis.

One of the most important areas of scientific and engineering progress is the wide assimilation of advanced technologies. Mankind has already built up much experience and, by using it, we will be able to achieve advances which will lead to a qualitatively new situation, not only for various types of production and for whole branches of industry but also for the economy as a whole.

The strategy of controlling scientific and engineering progress in the field of technology should be that of moving forward over a broad scientific and engineering front, first, concentrating existing resources on the development and introduction of the newest technologies in key priority areas; and second, paving the way for large-scale use of new and progressive technologies that are reliable, having been proven by domestic and foreign experience. A unity of approaches both for the development of new designs and for technological support for their production should be developed on that basis.

Up until now the following basic trends in the development of domestic machinebuilding technology have been noted:

- the creation of basically new technologies, using the achievements of modern basic sciences;
- an orientation to the comprehensive mechanization and automation of production; and
- the standardization of technologies, technological specialization, and modular integration.

In the area of creating new technologies, this is a departure from the traditional "material to blank to part" scheme of the technological process to combined processes for obtaining materials with simultaneous forming of the parts, that is, a combining of the functions of the technology and of materials science; an improvement of existing and the development of new technologies based on the use of high and cryogenic temperatures, high and pulsed pressures, vacuum and ion means (including plasma) and other working media, ultrasound, and ionizing and electromagnetic radiation; and a combining of

the technological processes in time and space and simultaneous machining on one operational field.

All this will enable new principles of the technological heritage of the material, parts and constructional structure to be developed and realized in a system of automated production with a guaranteed level of quality and reliability.

Wide use of high-speed precision machining based on machine tools with electromagnetic guides; multiple-operation machining using castings made of aluminum, titanium and other alloys; and the industrial production of ultradispersed powders that are obtained by the gas-dynamics method for creating new materials and coatings are expected.

These trends were reflected in the scientific program of the congress, which includes about 200 reports on urgent problems of modern machinebuilding technology.

Today, for the first time, machinebuilding manufacturing engineers, scientists and experienced workers, supervisors and specialists have gathered together in order to discuss and find ways for resolving problems that are not simple and are diverse:

- how to unite the efforts of machinebuilding manufacturing engineers, which are not coordinated now, and to work out a strategy and tactics for their joint activity which will lay the basis for motivating each and every person involved in this consolidation;
- how to make technology economical and not wasteful; and
- into which unified program the solutions of these extremely urgent problems are to be packaged.

Discussions and debates on these problems should be held openly in the spirit of genuine democracy, but the main things are to choose among the minor things the best achievements and experience and to develop an effective path for developing technological science and practice in machinebuilding.

In considering the professional level of the delegates and guests of the congress, as well as the subject matter of the reports of the scientific program on which many leading scientists and specialists in the area of technology have been working, we are counting on comprehensive and in-depth exposure of the congress's theme and on open and concerned debate at the plenary meetings and in the work of the sections. In essence, it is precisely such an exchange of opinions that will permit us to formulate collectively recommendations which we will have the right to present to the machinebuilding scientific-and-engineering society and to our collaborators, scientists of the USSR Academy of Sciences, the higher school, and the industry's science component with a view to consolidating our scientific potential and creative energy in solving the most urgent tasks of machinebuilding progress.

### Participants Listed

904G0027B Moscow STANDARTY I KACHESTVO  
in Russian No 2, Feb 90 pp 8-9

[Text] The following delivered reports at plenary sessions:

Chief of the NII [Scientific-Research Institute] for Technology and Organization of Production P. N. Belyanin, "A Rise in Machinebuilding Efficiency";

Academician B. Ye. Paton, "The Contemporary Status and Directions of Development of Welding and Kindred Technologies in Machinebuilding";

First Deputy Minister of Aviation Industry A. G. Bratukhin, "The Contemporary Status and Prospects for Using Ganged Machining in Machinebuilding";

Rector of MATI [Moscow Aviation Technology Institute] B. S. Mitin, "Problems and Prospects for the Technology of Moldmaking for Parts and Components Made of Hard-to-Deform Heterogenous Alloys and Powder and Composite Materials";

General Director of the NPO [Science and Production Association] Spektr V. V. Klyuyev, "The Main Directions for Developing Diagnostics Technologies"; and other speakers.

In all, 21 reports, whose topics embraced the entire spectrum of machinebuilding-technology problems, were read.

The congress's scientific program included the work of nine sections in the following areas:

- theoretical problems of machinebuilding technology;
- the main prospective technological processes;
- automated design of production processes in machinebuilding, and the computerization of production;
- progressive technologies for casting and welding production;
- moldmaking for parts and constructional structure made of metal and polymer and composite materials;
- technology for the precision machining of parts for machines and components;
- surface machining, hardening, the application of coatings, and materials modification in machinebuilding;
- the technology for assembling machines; and
- methods and means for the monitoring and testing of and diagnostics for machinery.

The sections rendered 236 reports and communications. All of them were distinguished by a quite high scientific and engineering level. Besides the problems that fell within the frameworks of the sections, heated discussions on application of the changes and supplements in the recommendations of the First All-Union Congress on Machinebuilding Technologies developed during the sessions.

The congress's work program included the problem of forming an All-Union Association for Machinebuilding Manufacturing Engineers. An amalgamation of the efforts of specialists of various machinebuilding branches were included in the task with a view to working out and implementing a single scientific and engineering policy for developing machinebuilding technology and international collaboration in this area. A temporary charter of the Association also was discussed widely at meetings of the sections.

The trade-fair exposition, "Machinebuilding Technology-89," opened up while the congress was at work. It provided propaganda and advertising for the newest and competitive technologies, equipment and installations and instruments and control systems for realizing them in the country's economy and abroad, and also for the sale of licenses, the organization of joint enterprises and companies for production of the products advertised, including agreements for performing joint research and for producing output with foreign-firm participation.

The trade-fair exposition consisted of two parts: one for Soviet enterprises and one for foreign firms.

On the congress' concluding day, the congress's recommendations were adopted, the Charter of the Association of Machinebuilding Manufacturing Engineers was approved, and election of the Association's Central Administration was held.

#### **Machinebuilders Association Formed**

*904G0027C Moscow STANDARTY I KACHESTVO in Russian No 2, Feb 90, p 9*

[Text] Some of the results of the congress were summed up at a briefing that was held on the concluding day of the congress. Taking part were A. F. Kamenev, chairman of the congress's organizing committee; P. N. Belyanin, deputy chairman; and Yu. I. Zvezdin, general director of NPO TsNIITMASH [Science and Production Association of the Central Scientific Research Institute for Machinebuilding Technology] and the elected chairman of the Association of Machinebuilding Manufacturing Engineers.

In the opinion of the organizing committee and of many delegates, the congress worked successfully and in businesslike fashion. For the first time in the whole history of Soviet machinebuilding, the most effective paths for developing it were analyzed and developed. From these standpoints the congress can be called history-making.

For the first time theorist manufacturing engineers and practicing manufacturing engineers were gathered in one room, and this promoted the arrangement of contacts between science and practice. Elimination of the gap between theory and practice alone will affect scientific and engineering progress positively. For it is no secret that practitioners quite often exert pressure on science, the practitioners needing not simply great discoveries but also those achievements that can even today be put into production.

The high scientific and engineering level of the congress's scientific program was noted. Taking part in the congresses work were 29 academicians, 14 corresponding members of the USSR Academy of Sciences, and 138 doctors and 181 candidates of engineering sciences. Representatives of 43 enterprises of all machinebuilding agencies, 28 vuzes, and 19 NII's took part in the congress's science program. Reports were made by 10 academicians and 77 doctors and 103 candidates of engineering sciences. In all, 236 people presented reports or communications in the sections.

The reports embrace practically all the problems of machinebuilding technology. The geographical origins of the delegates to the congress embraced all parts of the country. They came from Moscow and Novosibirsk, Leningrad and Ufa, Kiev and Sverdlovsk, Gorkiy and Kharkov. In all, reports were rendered on the congress's science program by representatives from 37 cities.

Scientists from the U.S., the FRG, France, Italy, Bulgaria, Hungary, Romania, Czechoslovakia and Yugoslavia were guests of the congress.

The country's manufacturing engineers have searched for a long time for paths to association, and unanimous adoption of the decision to create the USSR Association of Machinebuilding Manufacturing Engineers was a sort of concluding act of the desires of the manufacturing engineers.

The association created is a voluntary one. It will be able, in the established procedure, to create temporary collectives for developing technologies on an economic-accountability basis, to organize technological consultancies for designs for new types of machinebuilding output and centers for testing and certification, and to cultivate priority areas for developing machinebuilding technologies and special equipment and constructional materials for creating state orders, and many other things.

And there is more. Manufacturing engineers of defense and civilian machinebuilding have joined the association. Such a union will promote the development of progressive technology for consumer-goods production. This should also be reflected in output quality.

Moreover, the Association should focus its attention on preserving the rights of the consumer.

The association's administration, which consists of 53 people and an administration presidium of 15 people, were elected at the congress. The administration elected a chairman and two of his deputies.

The association was only created. Time will tell how it will operate. But the fact that active professional people are included in the administration inspires hope for the success of its work.

### Congress Recommendations

904G0027D Moscow STANDARTY I KACHESTVO  
in Russian No 2, Feb 90 p 10

[“From the Recommendations of the First All-Union Congress of Machinebuilding Manufacturing Engineers”]

[Text] World experience has shaped the main trends in the development of machinebuilding technologies in the modern era:

- a continuous increase in the diversity of forms, products mix, and quantity of the output being produced;
- an increase in the complexity of machinebuilding articles and a rise in their use of electronics;
- a shortening of the periods for preparing for the production of new machines;
- a rise in the requirements for professional qualification of all production personnel;
- an increase in the unification, a reduction in the number of types, standardization of all elements of production, and an intensification of specialized and an expansion in the scale of cooperative operations;
- accelerated updating of the pool of technological equipment, an expansion of the mix of technologies and structural materials being used, and an increase in the flexibility of all production structures; and
- growth in the scale of application of electronics and automation to production.

Both the further improvement of traditional technological processes and the scale of assimilation of new, highly efficient technological processes, with the use of high energy densities, which in recent years have been greatly developed in world practice, are strategic directions for solving these problems in domestic machinebuilding. The process of improving flexible automated and computerized production facilities is going on actively.

The problem of improving and increasing the efficiency of the technology for blank and tooling output, which lags considerably in the development and equipping of modern high-precision technological equipment, is especially urgent in domestic machinebuilding.

Problems of consolidating the efforts of manufacturing engineers who work in various machinebuilding branches and in branches other than machinebuilding, and who use primarily science-intensive and ecologically pure technologies, have matured. Collaboration with manufacturing engineers employed in systems of the USSR Academy of Sciences and of the higher school, as well as with manufacturing engineers of foreign countries, is being strengthened. Because of this, the First All-Union Congress of Machinebuilding Manufacturing Engineers considers it necessary to make the following recommendations:

1. Expand research in the area of the scientific bases for machinebuilding technology that provides for the comprehensive solution of constructional and technological tasks in the era of modern automated production of machinebuilding items.
2. Develop the theoretical bases for technological design and create mathematical models and methods for analyzing and synthesizing highly efficient technological processes.
3. Develop work on the creation of promising, ecologically clean basic technological processes which will enable articles with the prescribed specifications to be obtained at minimal cost in time, manual labor and energy.
4. Intensify work on the creation of computerized integrated production facilities, and introduce more widely design technology that uses SAPR [computer-aided design] and computer equipment.
5. Increase progress associated with standardization of types and in the unification of technological processes, using ganged machining and modular technology.
6. Expand the area of use of new, highly efficient technologies for mold-forming of parts and components made of alloys with special properties, polymers, metal and nonmetallic composites.
7. Develop work on the creation of laser-machining theory and expand scientific research on automating the processes of electrochemical and electrophysical machining, ultrahigh-speed cutting, friction technology, and nanotechnology.
8. Among the most important topics were operations connected with technological support of machinebuilding-output quality and with the creation of stable technologies for this purpose.
9. Develop work in the area of creating new methods and means for measurement and monitoring of tests and for diagnostics.
10. Expand the scale of research and development in the areas of the surface hardening of machine parts and the creation of protective and protective-and-hardening coatings and ecologically clean, wastefree and economical technologies for obtaining coatings with the prescribed surface-layer properties.
11. Improve assembling processes. In so doing, consider the following tasks as first priority:
  - develop the scientific bases for designing and optimizing assembly processes, comprehensive systems for design based on computer technology, and assembly equipment with the appropriate mathematical and program-software support; and
  - create the supply-and-equipment base for designing and manufacturing assembling machines

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—semiautomatic and automatic machines and devices and automated lines based on use of the principle of putting machines together out of unified components and modules.

12. Expand the use of mechanized and automated technologies for traditional and promising welding methods, including arc, resistance, electron-beam, laser, magnetic-discharge and microwave-radiation welding.

13. In the area of the economics and organization of technological production, a policy of effective economic

motivation for raising labor productivity and output quality, for shortening the time spent creating and assimilating production facilities for new machinery, for making rational use of and for saving all types of resources, and for the ecological purity of production should be instituted. The basic task remains that of increasing the skills, responsibility and discipline of personnel and of creating conditions for retaining personnel at the production facility.

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## CIVIL AVIATION

### Tu-144 History, New Role Examined

904H0191A Moscow KRYLYA RODINY in Russian  
No 3, Mar 90 pp 14-16

[Article by Gennadiy Maksimovich: "The Time has Come to Tell How the Tu-144 'Was Lost'"]

[Text] Not a month passes that the editorial staff does not receive letters from readers asking about the history of the development of the Tu-144 aircraft and the reasons for its unfortunate fate. At the very least, the "Concorde" is still making flights. But since our aircraft discontinued them 11 years ago, it has not resumed them.

And here is a conversation with Honored Test Pilot of the USSR Andrey Ivanovich Talalakin.

"I had occasion to fly the Tu-144," he said. "I have flown almost all the postwar aircraft of this OKB [experimental design bureau]. Did I like this aircraft? Why not! This is a real Tupolev aircraft! Of course, something still had to be 'refined' in it, as with every aircraft, after all. But in principle, when it was finally 'tightened up,' this was what we could boldly call a passenger aircraft..."

In the eyes of a test pilot, what happened with the Tu-144 was a problem with all our aircraft manufacturing. Too often it is as if an aircraft has a hundred bosses, and each one of them puts the blame on another one if something happens. Can any sense really come out of a such a situation?..

So the first supersonic passenger aircraft took off on 31 December 1968, and passenger flights were discontinued on 23 May 1978. Exactly what happened with it? Were structural flaws brought to light, and did the "oil boom" and unprofitability play a role? Besides, the "Concorde" is still flying...

I put all these questions to Yuriy Nikolayevich Popov, the chief engineer of the OKB imeni A. N. Tupolev, who took part firsthand in developing the Tu-144. And it was confirmed that our Tu-144 and the "Concorde" are very similar, but the "Buran" is similar to the "Shuttle" and the A-320 is similar to a Boeing aircraft, too.

The point is that many aircraft of roughly the same category and developed in the same period always have common features, and quite often they even "match" completely. Scientific concepts are developed in the same direction, on a roughly equal scientific and technical level, regardless of state borders.

At the same time, differences are inevitable as well. In the first place, the Tu-144's wing is different from the "Concorde" wing; it is similar only in outward appearance. The engine nacelles and power plant arrangement are different. The "Concorde's" power plant is actually positioned under the wing, with short air intakes; the Tu-144 has an air intake under the wing extension.

"You see, the wing is quite clearly divided into the extended section and the wing proper," Popov points out. "On the 'Concorde,' the power plant is on the basic wing, whereas the Tu-144's power plant is close to the axis, under the extended section. In addition, the configuration of our landing gear and cabin is completely different... The foreign press provided quite detailed reports and comment on this new achievement of our science and technology—the first flight of the Tu-144. I recall that the British paper GUARDIAN devoted an editorial to the event. THE NEW YORK TIMES even came to the conclusion that the Tu-144 aircraft 'has put the Soviet Union ahead of all the countries seeking to develop civil air service at supersonic speeds.'"

Judging from everything, the West was able to judge our country's contribution to aviation science and technology at its true worth. But let us confess that in our own Motherland, alas...

Meanwhile, the "Concorde" made its first flight on 2 March 1969, but it began operating on 21 January 1976. (It has a takeoff mass of 185 tons, fuel supply of 96 tons, and a range of 6,500 kilometers. It has a cruising speed of Mach 2.02, or 2,150 kilometers per hour, an initial cruising altitude of 15,000 meters, a maximum altitude of 18,000 meters, and a landing speed of about 300 kilometers per hour. The cabin holds about 100 passengers.) The flight from London or Paris to New York takes just 3.5 hours. With the most running time, the aircraft has accumulated 9,640 hours, that is, 2,722 supersonic flight cycles, and it has made 3,500 landings.

In its 10 years of operation, the British Concorde Airline, which operates seven aircraft, has carried over 800,000 passengers. Air France's aircraft have carried 621,000 passengers in the 10 years; they have made 10,500 flights and accrued 46,850 hours of flying time. Their level of departure reliability is 99.2 percent, with a load factor of 62.8 percent.

Unfortunately, we cannot boast of such figures. In spite of the fact that our Tu-144 was the first to take off. Its flaws have been and are still mentioned a great deal, overlooking the fact that any aircraft, especially a new one that is not in mass production and is in the hands of test pilots, always has some operating defects.

There is no question that minor defects that were not basic were found on the Tu-144, but they did not affect its flight safety. And that brief experience we had on the Moscow to Alma-Ata route showed that we can work with this aircraft and operate it.

I think that the main reason was that Aeroflot did not want to "take" the Tu-144. This was a fundamentally new aircraft for it, and it was rather complicated to operate and maintain. Consequently, it had to be studied thoroughly. But Aeroflot, judging from everything, did not want very much to do this. It is much simpler to work with conventional aircraft, of course.

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But did they really study the aircraft seriously? They only sold the tickets for it. The OKB organized the ground mainetenance. The crew was only "half of one-half": one Ministry of Civil Aviation pilot and one test pilot. With flight engineers, too. Only the stewardesses really worked for Aeroflot. Even the fuel came from the OKB, by the way. (Somewhat different fuel is required for supersonic aircraft than for conventional aircraft. Fuel that is more thermostable was used.)

The beginning of Tu-144 flights coincided with the jump in oil prices. But the aircraft consumed three times as much fuel as an Il-62. So Aeroflot representatives began saying that they do not need such a complicated, expensive, and uneconomical aircraft.

But on the railroad, tickets for an express train cost more than those for an ordinary passenger train. I am confident that it is precisely for this reason that the "Concorde" is still flying and business people have long realized the advantages of speed. There is a great deal of difference between spending 3 or 3 and a half hours on a flight and 8 hours. Moreover, the longer the flight, the quicker a passenger begins to get tired. Observations confirm that a person's capacity for work is still retained after a 3-hour flight, but we need continuous rest after an 8-hour flight.

It is probably precisely for this reason that the Tu-144 did not take root in Aeroflot, because at that time there were not so many business people. Nobody was in a particular hurry to get anywhere...

Both the government and the Ministry of Civil Aviation (Aeroflot) realized the large amount of work to develop the world's first supersonic airliner. There was a special government decree on its development and there were tactical and technical requirements from the ministry. When the decision was approved and they told Nikita Sergeyevich Khrushchev that the aircraft would turn out to be very "voracious," he answered: this is not so important, we have a lot of kerosene. Later, as we all know, not only the party leadership was replaced. And everyone began to disown the aircraft, as if they did not know before what its cost would be, how much fuel it would consume, and how peofitable it would be.

In determining which aircraft is "good" and which one is "bad," Aeroflot has often proceeded not from the actual truths and realities or made use of the data and opinion of specialists, but just its own subjective assessments. But later all the institutes and aviation scientists in the Ministry of Civil Aviation began assiduously demonstrating what sometimes cannot be proved at all.

On orders from the top, numerous NII [scientific research institutes] began looking for the existing and nonexistent defects in the aircraft. The list of them is quite impressive. A decision was also made on this basis: the Tu-144 cannot be used for commercial passenger flights.

And there was also the Tu-144 disaster on 3 June 1973 during a demonstration flight at Le Bourget Airport in France, as well as the accident in a test flight on 28 May 1978.

"I remember these accidents well," said Yu. Popov, "especially as I was a witness to the first one. But honestly, is it really only our aircraft that have had accidents? They are a rather frequent occurrence, especially with new aircraft. Moreover, as a joint Franco-Soviet commission established (the disaster occurred in Paris, and under ICAO [International Civil Aviation Organization] regulations, the investigation was conducted by the country on whose territory it occurred), it was persons, not equipment, that let us down that time.

Yes, the official conclusion determined the cause of the disaster. The French had released their "Mirage" reconnaissance aircraft, which photographed the Tu-144 on takeoff and measured its performance. When our aircraft began a sharp climb, they came dangerously close together. The "144" pilots, seeing an aircraft over them which had come out of nowhere, naturally descended abruptly, as directed in the regulations. Later, when they came closer to the ground, they pulled back on the controls sharply. The proof load factor was exceeded, and the aircraft was destroyed for this reason.

It was a terrible spectacle. Here was an aircraft which wasdisintegrating in mid-air as if for no apparent reason, and burning debris from it was beginning to fall to the ground...

The "Mirage" had been in the air illegally, and the French felt awkward for this reason. But I think there was one more reason. The fact is that a television correspondent was asking all the time to be on board to photograph all the crew's work during the flight. They refused, but one of the crew members who apparently felt sorry for him agreed to take the camera with him. It is clear that during the aircraft's acceleration he was standing next to the pilots and taking a picture. At the moment that the aircraft abruptly lost altitude, he could have dropped the camera and it could have hit the pilots' legs, interfering with their work. Some time elapsed before they pulled it out. And it was precisely what proved to be fateful. After all, the overloading when an aircraft descends is insignificant. All this was simulated and confirmed that this version was entirely possible.

The second case can be called ordinary, generally speaking. Passenger flights on the Moscow to Alma-Ata to Moscow route were made with engines designed by D. Kuznetsov. But in this case a test flight was being made with engines designed by P. Kolesov. An accident took place because of the fatigue failure of an element in the fuel system. Well, later on something happened which always takes place in such situations, especially when an aircraft has many opponents in high positions. Flights

with all the aircraft were "temporarily" suspended, supposedly to look into the causes and make the necessary modifications. However, no more passengers flew on the Tu-144 after this...

The opinion exists that if Andrey Nikolayevich Tupolev had been alive then he would have been able to make a stand for the aircraft, all the same. It was much more complicated for Aleksey Andreyevich to do this. He had just been appointed as general designer.

But not all the aircraft were scrapped. Many of them are still maintained intact in museums, and some of them continue to fly. I had occasion to enjoy a Tu-144 flight myself not so long ago. Of course, it is a pity that the first in this series with the number USSR-68001 was scrapped without any justification. It is precisely the one which should have been left, even though it had completed its service life.

Tu-144's are being used extensively in the training process as well. Students at the Kazan and Kuybyshev Institutes of Civil Aviation familiarize themselves with the advanced technology in its "full scale," so to speak, not out of touch, on test benches. The entire complex of on-board equipment and hydraulic systems have been preserved... We can say without exaggerating that the Tu-144 was a unique design project, with its large assemblies made of titanium alloys and composites and the on-board computer hardware.

Today the Tu-144 is also operating as an experimental aircraft. A multiple-specialty laboratory is being set up on board, which will conduct extensive research in the atmosphere, studying ozone holes and radiation. Incidentally, the crews preparing for flights in the reusable spaceship "Buran" perfected their landing in the Tu-144. Perhaps the Tu-144 was not so unlucky? Not one aircraft aside from the first one was lost for no purpose. Although they probably were not treated wisely. Some may reproach me for bias, but I am still convinced that the excellent design developed at the OKB is not inferior to the "Concorde" in any way, and that those funds spent on building a series of aircraft required a more considerate, sensitive, and conscientious attitude. And it is no coincidence that 13 world records for speed and altitude with a cargo of 5 to 30 tons were set by the Tu-144 after passenger flights were discontinued.

The experience accumulated is not being lost in vain, of course. We are actively engaged in developing a second-generation supersonic airliner today. Work such as this is not only under way here, but in other "aviation" countries as well. And who knows, it is quite possible that we all will finally realize that this work is very expensive and it must be conducted jointly. The USSR, the FRG, Britain and France, let us say. Ideas such as this are already being discussed today.

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### Il-96-300 Test Flight, Production Delay Reported

904H0191B Moscow PRAVDA in Russian 22 Apr 90  
Second Edition p 8

[Report by PRAVDA special correspondent V. Chebakov: "To the Union's Farthest Airport"]

[Text] An experimental long-distance flight has been made by the new Soviet wide-bodied aircraft, the Il-96-300, from Moscow to Yuzhno-Sakhalinsk and Khabarovsk and return to Moscow. The OKB [Experimental Design Bureau] imeni S. V. Ilyushin has developed an economical, comfortable 300-passenger aircraft capable of flying long distances. PRAVDA'S special correspondent also took part in this test flight.

I met the aircraft commander, Honored Test Pilot and Hero of the Soviet Union Stanislav Bliznyuk, before the flight as an old acquaintance. I have flown with the crews of test pilots from the OKB imeni Ilyushin on several occasions. But this is the first time on a long-distance flight. Only half the passenger seats were in the softly-lit cabins. A great deal of space was occupied by electronic instruments to register and record the behavior of the aircraft's systems in flight.

"How far is it to Yuzhno-Sakhalinsk?" I ask Stanislav Grigoryevich.

"It is 6,925 kilometers. The aircraft's takeoff weight is 215 tons. We should get there in 8 hours."

It is 0111 hours. The aircraft speeds into the dark sky over a Moscow suburb. When we reached altitude and afterward I caught myself thinking: but I don't hear the engines. Neither in the tail nor near the cockpit. The impression is that the turbines are operating noiselessly.

I interview Genrikh Novozhilov, the general designer of the OKB imeni Ilyushin and USSR people's deputy.

"We want to draw attention with this flight to the situation that has taken shape in developing new aircraft for civil aviation," said Genrikh Vasilyevich. "There are many problems. We are behind in putting the Il-96-300 and Il-114 aircraft into use, and Aeroflot has been waiting for them for a long time. There are objective reasons, of course. Everything new has been incorporated in the design of these aircraft, but those who are developing the advanced systems do not have an adequate material and technical base. This has an effect on the reliability of new assemblies and instruments and on the pace of testing. Organizationally, everything has been set up so that what is new is developed and assimilated with great difficulty."

This applies primarily to the electronics and engines. We are flying now with new engines, but they still do not meet all the requirements set for them, and they are not ready for state tests...

A little history. The wide-bodied Boeing 747 began operating in 1970. Sergey Vladimirovich Ilyushin asked the minister of civil aviation 2 years before this: "Do we

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need such an aircraft?" "No, we have other ways of developing civil aviation," was the response. But Ilyushin believed that an aircraft like this must be built. Time was lost. Only in 1972 did the high command come to the conclusion that we need a wide-bodied aircraft, and the government made the decision to develop an airliner with the ridiculous range of 2,300 kilometers. In 1978 the OKB proposed an entire program to develop a family of wide-bodied aircraft for 350 and 220 passengers to be used for long flights. But they did not support it...

The aviators on Sakhalin looked at our Il-96-300 fondly. Anatoliy Korolev, the commander of the Sakhalin Aviation Enterprise, said sadly: "We needed aircraft such as this the day before yesterday. You know how people suffer when they want to fly away on vacation. And what is going on in Khabarovsk? They already need 50 such 'Il's' there now."

I heard the same words in Khabarovsk as well.

I continued the conversation with Novozhilov: "What is different about flying the new aircraft?"

"The up-to-date cockpit in the Il-96-300, the Tu-204, and the Il-114 differs substantially in the display and presentation of information. Roughly speaking, the pilot used to fly by needles, but today it is by figures. The advanced flight control and navigation complex requires a change in the pilot's psychology."

"When will the aircraft receive its airworthiness certificate?"

"This year, according to the plans. But it is clear that a delay until 1991 is unavoidable. We are conducting tests practically together with civil aviation pilots. GosNIIGA [State Civil Aviation Scientific Research Institute] Chief Pilot Nikolay Yurskov is working in the cockpit now with Bliznyuk. He determines the aircraft's performance and its certification. This will help to shorten the period for putting it into operation."

The cities and time zones changed. The Il-96-300 mastered the lengthy route successfully. Millions of people are waiting for the day when the designation of the new aircraft appears in the schedules for Aeroflot's regular flights.

#### Civil Aviation Ministry Business Affairs Administration's Role

904H0149A Moscow VOZDUSHNYY TRANSPORT  
in Russian 17 Feb 90 pp 2-3

[Interview with K. Mishukov, manager of the Business Affairs Administration of the Ministry of Civil Aviation, by VOZDUSHNYY TRANSPORT special correspondent V. Tamarin: "A Bureaucracy Without Bureaucrats?"]

[Text] *K. Mishukov, the business affairs manager (UD) of the Ministry of Civil Aviation, responds to readers' questions, asked on their behalf by VOZDUSHNYY TRANSPORT special correspondent at the ministry, V. Tamarin.*

[Tamarin] Konstantin Stepanovich, out of the numerous letters to the editorial staff asking that "the doors be opened part way" to the ministry's administrations and departments, there are some like the following: the Ministry of Civil Aviation is not the Council of Ministers, so why does it need a Business Affairs Administration? And what kind of business is it managing? Let us open the doors to the administration a little.

[Mishukov] I am ready and willing to do this. Especially as it is precisely the Business Affairs Administration that is also "opening" the door to ministry visitors—through the waiting room; the correspondence dealing with aviation workers' requests and complaints comes right through here.

The UD of the Ministry of Civil Aviation was established by an order on 13 November 1980 on the basis of an office, the AKhU [presumably: Administrative and Economic Administration], and the Control Inspectorate. The mission was stated this way: to strengthen and increase the effectiveness of control over the implementation of decisions by directive organs and the ministry itself, as well as to improve record-keeping.

Under the new structure of the ministry's central staff that was recently adopted, the Legal Department of the ministry became part of the Business Affairs Administration. It should also be noted that four organizations are subordinate to the UD: the Official and Residential Buildings Administration (USiZhS), the Construction and Repair Section (RSU), a rental service, and the Moscow Motor Transport Enterprise of Civil Aviation. In short, the Business Affairs Administration provides records, administrative, financial, material-technical, and personal service support for the activity of the ministry's central staff and organizes the legal defense of its employees. To put it in figures, the UD has eight main responsibilities and 48 functional ones.

[Tamarin] Quite a few! I can imagine how much paper is accumulated. I am curious to learn if you see a trend toward reduction of incoming and outgoing documents.

[Mishukov] The ministry has increased efficiency in management, it is utilizing personal contact more extensively to resolve official matters, it is trying to do away with unwarranted correspondence between administrations and departments in the ministry, and it is trying to discontinue distribution to administrations and organizations of documents which have no relationship to their work.

Changes in the work style and methods of the central staff are evident from the appreciable reduction of documents coming from the ministry, compared with previous years. The number of organizational-administrative and normative documents issued over

the signature of the minister or approved by him and his deputies declined by 20 percent in 1989, compared with 1988 (1,195 in 1989 and 1,504 in 1988). These include orders, instructions, directives, plans for measures, and decrees of the collegium. The number of letters sent was reduced from 3,595 in 1988 to 2,566 in 1989. It is also noteworthy that the total number of documents coming out of the ministry declined from 28,460 in 1988 to 23,860 in 1989. We will continue to take the most decisive steps to reduce correspondence. And in this respect we are constantly aware of support through articles in VOZDUSHNYY TRANSPORT.

[Tamarin] We speak often and a great deal about conscientiousness and organizing and improving control. It seems to me that the successes in perestroika would be more substantial if all the decisions adopted were carried out. Isn't that so?

[Mishukov] I agree. Here is an example. The Control Inspectorate found that the implementation of 28 very important documents was delayed in 1989. This means that the planning of measures for the end of the month, the quarter, or the year leads to frequent postponements of the periods of execution. Hence the irritability and mutual accusations, and as a result, failure to fulfill what was planned.

[Tamarin] And how does the development of scientific and technical progress affect the work of the Business Affairs Administration?

[Mishukov] On the instructions of the UD, a technical assignment has been worked out for the first stage of the complex automated system for documentary support of the ministry's management (KASDOU-MGA). It is intended for automation of the processes of documentary support for management in the ministry's central organization (in the first stage) and for the sector as a whole (in the subsequent stage of development and introduction).

[Tamarin] What is new in the work with letters and complaints from aviators? Has the style of accepting personal questions been changed?

[Mishukov] Under the regulation in effect (Ministry of Civil Aviation Order No 200 of 20 December 1988), the chiefs of administrations bear personal responsibility for work with letters from citizens, the timeliness of execution and the justification for adopting decisions in the central organization of the ministry; in local areas, the managers of administrations, associations, and organizations of civil aviation bear this responsibility. However, as noted in Decree No 7/UP of 17 June 1988 issued by the USSR Committee of People's Control "On serious shortcomings in the work to review letters, requests and complaints from citizens in the USSR Ministry of Civil Aviation," one of the main reasons for the shortcomings that were revealed is the fact that an atmosphere of high exactingness and strictness has not been created in the ministry toward the managers of administrations and associations.

It is reassuring that the number of letters coming to the ministry for review through the higher organs, as well as newspaper and journal editorial staffs, declined in 1989. Some 27 instructions from ministry managers regarding articles and critical items in the newspaper VOZDUSHNYY TRANSPORT were subjected to special followup. But the effectiveness of the steps taken with respect to the articles is still inadequate, apparently.

[Tamarin] And how is the work with appeals from USSR people's deputies organized?

[Mishukov] In order to ensure the Ministry of Civil Aviation's prompt examination of letters, suggestions, inquiries and statements from USSR people's deputies, a working group under the chairmanship of a deputy minister, V. Kurilo, the chief of the GEU [possibly: Economic Main Administration], was established by a ministry directive of 23 May 1989. All appeals from deputies, and there were 313 in 1989, were reported to the minister or his first deputy without delay, and during the period that the congresses of people's deputies were in session, the questions from USSR people's deputies were resolved, especially during the congresses or sessions of the USSR Supreme Soviet, and information was prepared on the distribution of responsibilities (the range of questions being treated) among Deputy Ministers V. Kurilo, Yu. Yurkin, and O. Smirnov. It is planned to create a Ministry of Civil Aviation working group for interaction with the USSR Supreme Soviet.

[Tamarin] All last year the ministry's Business Affairs Administration was regulating the expenditure of travel funds by officials of the ministry apparatus. What came of this?

[Mishukov] The number of out-of-town trips by ministry staffers did not decline in 1989: 2,738 travel authorizations were issued (2,365 in 1988).

An analysis conducted by the Business Affairs Administration last June on the correctness of authorization and the advisability of sending employees on official trips brought to light serious violations of the ministry's Directive No 228/U of 12 April 1989: there have been cases in which travel authorizations are signed by persons who do not have this right, and unjustified trips by employees on Saturdays and Sundays (especially in summer to airports in the country's South). In violation of legislation and without prior agreement on compensation for expenses, travel authorizations were issued for participation in the courts' work. Sloppy work, erasures, correction of the number of days on a trip and marking of the destination points in travel authorizations were permitted.

The number of departures for Moscow from civil aviation administrations and organizations (both at persons' own initiative and when they are summoned to the ministry) increased as well: 2,867 travel authorizations were recorded in 1989 (1,669 in 1988); An economic seminar at the Ministry of Civil Aviation and a meeting of civil aviation employees with Ministry of the Aviation

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**Industry leaders on 30 January made it possible to resolve many problems without "a barrage of incoming and outgoing documents."**

[Tamarin] Readers are interested in learning where the employees of the Business Affairs Administration come from and what their educational qualifications and skills are.

[Mishukov] It was thought previously that any staffer could work in the Business Affairs Administration. Times have changed, documentary support has become much more complicated, and the number, quality and content of documents and the procedure for handling them have changed. The use of computer hardware and mathematical methods of data processing—this is not only new technology, but a new level of work for the employee, who can obtain the necessary documents expeditiously, and indicators which reflect the status of projects under study, their reserves, their "ills" and deviations. Essentially a new stage in scientific organization is under way, managerial work which provides for higher productivity and new substance. In this connection, a "model" of a document specialist is being completed at the Moscow Historical Archives Institute with a prediction of managerial work in the future. In my opinion, this employee should have a broad cultural and scientific outlook and good training in sociopolitical, humanities, legal, psychological and economic problems.

At present there are 56 staffers in the Business Affairs Administration (along with the Legal Department). As with everyone else, we have been cut back by a factor of three. Of the 56 individuals, 33 have a higher education, three will soon complete their instruction in VUZes, seven employees have a specialized secondary education, and the remainder have a general secondary education, but with considerable experience in practical work in the administration.

[Tamarin] Lately the words "apparat" and "apparatchik," which not long ago attested to a certain elitism of a work place and social position stemming from the command and bureaucratic system, have become common. Your service and your position, it would seem, are entirely and completely in keeping with the definitions which are being subjected to criticism. How do you regard this?

[Mishukov] I share in criticizing those ossified systems which engendered the people's negative regard for their fellow citizens who work in office institutions. But there are staff members who correspond exactly to the caricature of the Soviet bureaucrat, and there are persons for whom clerical work and creating documents are vital and real work.

As far as the central organization of the Ministry of Civil Aviation is concerned, it should be noted that basically the best specialists in the sector, who are not taking their time and health into account, are working in it. Our task is to be the real headquarters for the sector.

The Ministry of Civil Aviation is now shifting to a new organizational structure for management in conformity with the USSR Council of Ministers decree of 28 December 1989. Employees of the central staff are undergoing special certification. The ministry's work is being reoriented to resolve the strategic tasks of developing the sector, drafting and introducing the legal foundations to provide for flight safety and economic activity, and improving the structure of the sector's management. And how aviation employees regard "the apparatus" will depend on how we carry out these tasks.

[Tamarin] On behalf of our readers, we express the hope that the Ministry of Civil Aviation really delegates a number of its powers to the local areas, so that we don't run into visitors with complaints in the ministry's waiting room and so that the problems which concern the people are resolved in the enterprises and administrations, not in Moscow.

Letters from Yu. Kokhan (Uzhgorod), V. Saakyan (Yerevan), G. Kungurova (Nikolayev), V. Blazhkevich (Dushanbe), and others were used in the discussion.

#### Radiation Hazard at Minsk Airport Noted

##### Special Commission Investigates

904H0147A Moscow *IZVESTIYA* in Russian  
12 Feb 90 Morning Edition p 6

[Report by *IZVESTIYA* correspondent N. Matukovskiy: "They Are Waiting for Monday"]

[Text] Minsk—One problem comes unexpectedly like a bolt from the blue, and another one creeps up quietly and inconspicuously. It is even more dangerous, because people are not aware of it right away and they do not take steps immediately. This is precisely how it happened the other day at the Minsk-2 Airport.

N. Lovkin, the chief of the airport's militia department, tells the story:

"First the freight handlers complained that they were experiencing a strange weakness and nausea each time after work at the fourth commercial warehouse. Someone suspected that this was the effect of radiation. After all, cargoes with radioactive isotopes are received right here. We inspected the freight handlers' clothing with a dosimeter, and it was several times above the norm. We entered the warehouse and the instruments went off the scale. It became clear that the source of the radiation was really there. We immediately informed the republic Ministry of Health. On Saturday night the deputy chief sanitary inspector for the republic, M. Serafimovich, and the head of the radiology department of the BSSR Ministry of Health, A. Kondratyev, arrived at the airport. They confirmed the presence of radiation danger. Later this was confirmed by representatives of civil defense headquarters. No one was permitted inside the warehouse, and measurements were taken on the threshold and in the doors. That was enough. The

Ministry of Health representatives reassured us: do not touch anything, we will come on Monday at 0930, and we will look into the problem then..."

Before sealing up the warehouse, militia employees entered it anyway and found that the source of the higher radiation was several dozen cartons measuring 20 by 30 and 40 by 50 centimeters. They sealed the warehouse.

I asked N. Cherginets, chief of the Belorussian Administration of Internal Affairs in Transport, candidate of juridical sciences, and colonel of militia, to comment on what had happened.

"What took place at the Minsk-2 Airport was an accident, of course. It can have far-reaching consequences. After all, packages with radioactive isotopes have been carried by aircraft for many years. They come to our city from Moscow, Leningrad, Kiev and Tashkent in cartons. They are probably packed inside in something more secure. But as you see, this 'security' does not always work."

"Who ships such cargo and whom is it meant for?"

"It is not so simple to find the shippers—they are all 'post office boxes.' But we identified the consignees right away, according to the documents. The main addressee is the Belorussian State University. Its cargo has been in the warehouse since January. Among the consignees are the Scientific Research Institutes of Radiology, Oncology, and Nuclear Power Engineering, an oblast clinical hospital, the Institute of Radiobiology, the Medical Institute, and the Oncological Dispensary. There are 39 addressees in all."

"A special commission will determine if one package or several were destroyed," N. Cherginets continued. Depending on this it will become clear which aircraft and which crews have to be checked for contamination. It is outrageous that such dangerous cargoes are carried in normal aircraft."

I will say more: the danger can come not only from the sky—it can "arrive" by rail as well.

So they decided to wait until Monday. But how many persons will be passing near the fourth warehouse during that time? Couldn't steps have been taken immediately?!

We will report to readers on the results of the commission's work, naturally.

#### Freight Handling Practices Questioned

904H0147B Moscow *IZVESTIYA* in Russian  
20 Feb 90 Morning Edition p 3

[Report by *IZVESTIYA* correspondent N. Matukovskiy:  
"A 16-Ruble Fine for the Radiation"]

[Text] Minsk—"They Are Waiting for Monday"—this was the title of a brief report published in *IZVESTIYA* (No 43 this year). It told of the emergency at the Minsk-2 Airport, where a large quantity of highly radioactive

freight had accumulated at a commercial warehouse through the fault of certain organizations in the republic capital. As a result, the gamma background was sharply increased in the warehouse itself and around it.

On Monday, 12 February, the day the newspaper carried that report, the warehouse was inspected by a commission; each box with the cargo was checked on the outside with dosimetric instruments. The radiation level was hundreds of times higher than the natural background. I hasten to reassure readers that a big disaster fortunately did not take place, but it was not far away...

Just what took place at the airport? There is a definite procedure for transporting preparations with radioactive isotopes, which are needed in medical institutions, especially oncological ones, as well as different research laboratories. All these substances must be handled very carefully and special safety measures must be taken in transporting them. The shipper of the cargo, for example, is obliged to inform the addressee by express telegram of the date, time, flight number, and quantity of containers shipped. The addressee should receive his cargo firsthand at the aircraft. They cannot be transported in large consignments, and especially because they cannot be stored for a long period in a warehouse.

These rules are being flagrantly violated. The maximum storage period in warehouses is 12 hours. But the boxes with radioactive isotopes for the Belorussian State University imeni V. I. Lenin were in the airport warehouse for 3 weeks! Messengers from the university hurried over for their cargo on Monday, after reading the report in *IZVESTIYA*, and paid a fine of 16 rubles and 30 kopecks—the penalty ceiling for storing their extremely dangerous shipment.

At the time that the higher radiation background was recorded in the warehouse, 77 cartons were being stored there. I was at the warehouse on Tuesday; 25 containers still remained there, but on Monday night another 50 packages like this had been delivered by aircraft from Moscow. Perhaps a unique situation had taken shape at the airport. Aeroflot employees had selected the "radioactive" flights. It turned out that there were days when more than 200 such containers were accumulated at the Minsk-2 Airport warehouse and they were being stored there for weeks.

G. Tyulopa, the chief of the Minsk-2 Airport, noted: "The country lacks a reliable system for transporting cargoes with higher radiation by air. They are hampered by departmental barriers: one department sends, another one transports, and a third one receives and uses these cargoes. Who is responsible?"

There is one more "but" in this miserable story. The militia employees who provided information to an *IZVESTIYA* correspondent were severely reprimanded by their superiors for "divulging information." M. Serafimovich, deputy chief sanitary inspector of the republic's Ministry of Health, who was the first to sound the alarm about what had happened at the airport

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warehouse, incidentally, was more surprised than anyone. He threatened over the telephone that he would not only write a denial addressed to the chief editor, but take it into court as well. Why? Because in his opinion, I am creating a sensation and panic among the Soviet people with "a worthless story."

But perhaps this is all really trivial? I telephone V. Nesterenko, manager of the safety laboratory of the AES at the Institute of Nuclear Power Engineering of the BSSR Academy of Sciences.

"Vasiliy Borisovich, can a gamma background whose intensity reaches 9 milliroentgens per hour be disregarded?"

"By no means! This is a very dangerous background. It is permissible for me, as a professional nuclear energy worker, to work 6 hours a day if the gamma background is no higher than 2.9 milliroentgens per hour. How long did this background last?"

Alas, no one can answer this question clearly. Generally speaking, the position of public health management employees in Belorussia is not surprising. Quite recently they eagerly assured everyone in the press and on television that there was no radiation in Belorussia after Chernobyl, and that they could go sunbathing or swimming or gather mushrooms and berries in the forest without any restrictions. A high price has to be paid today for those irresponsible assurances.

L. Drobyshevskiy, the Minsk public prosecutor, took a position based on principle:

"We are examining the entire chain of the most flagrant violations in this case. The prosecutor's office will conduct a thorough investigation, identify the specific guilty persons, and establish the degree of guilt for each one of them."

## MOTOR VEHICLES, HIGHWAYS

UDC 621.43-033.6

### Ceramics Tested in Engine Construction

*904H0184A Moscow AVTOMOBILNAYA PROMYSHLENNOST in Russian No 12, Dec 89 pp 8-9*

[Article by A.A. Belyakov, candidate of technical sciences, Motor Vehicle Industry Information Scientific Research Institute: "On the Way To Widespread Introduction"]

[Text] During recent years, many foreign firms have expanded their work to develop ceramic materials and use them in internal combustion engines. For example, the United States, FRG and Japan have built models of engines that widely incorporate special ceramics, mastered technological processes for obtaining finely dispersed ceramic powders, and developed and are delivering industrial technical equipment to manufacture ceramic blanks and items for internal combustion engines. All of this work is being done within the framework of national programs.

This attention toward the problem is understandable: First, ceramics permit the building of highly economical (because there is little heat transfer into the atmosphere) diesel engines and, second, heat resistance is sharply increased and the weight of internal combustion engine parts of all types is reduced. Thus, calculations show: If the cylinder and piston group, gas exhaust system, rotor, turbocompressor casing, and power turbine items are made from ceramics, this adiabatic engine will use less fuel than a standard diesel engine (by 30 percent); its weight and volume, the toxicity of the exhaust gases, the operating noise, and the expenditures on technical maintenance will be less; and its reliability will be higher (because the lubrication system has been eliminated). Moreover, it is a multifuel one.

A preliminary appraisal shows that the use of heat insulating ceramic materials in KamAZ [Kama Motor Vehicle Works] and YaMZ [Yaroslavl Engine Plant] diesel engines will save the country approximately three million tons of diesel fuel and up to 8,000 tons of non-ferrous metals, which is equal to 300 million rubles (on a yearly basis), if they become adiabatic ones.

Construction ceramics are no less beneficial in the manufacturing of serially produced internal combustion engine friction assemblies (valve lifters, guide bushings, lifter arms, water pump facing seals, etc.). For example, the use of ceramic friction pairs can increase engine life and durability—at times rather sharply. At the same time, fuel consumption is reduced by three-five percent. In addition, the wear resistance of ceramics is higher than that of other materials; consequently, it reduces the production of friction assemblies for spare parts.

Recently, ceramics have been attracting the bearing industry's attention to a greater and greater degree. The specialists in this subbranch understand that in order to satisfy the demand for plain and bush rolling bearings, which has sharply grown during recent years, not only new designs but also new materials are needed. For example, only ceramics can satisfy such requirements as the ability to operate under temperatures on the order of 1,670 K (1,400 °C), in a vacuum without lubrication, in a corrosive medium, etc. Special steels and alloys are not suitable for this. Indirect evidence of this is the appearance of press reports on the production of ceramic bearings by European, American and Japanese firms and the testing of bearings with ceramic rings and rolling bodies designed for the bearing shafts of gas turbines.

Calculations also confirm the high effectiveness of ceramics in engine friction assemblies and bearings of various types. For example, if losses to friction are reduced by five percent through the use of such pairs, diesel engines will consume two million tons of fuel less during a year; if the service life of the "cam-lifter" pair in a KamAZ-740 diesel engine is doubled through the use

of ceramic lifters, more than 1.5 million rubles will be saved a year; if the bearing industry begins to make special bearings made out of ceramic materials for operations in a corrosive medium and also free oil equipment balls, the annual economic effect will exceed one million rubles even with insignificant production amounts.

In brief, these are the capabilities of ceramics. Unfortunately, however, they are not being fully realized because the branch's leading scientific research institute on materials—NIIATM [Automotive Tractor Material Scientific Research Institute]—began to work on ceramics only in 1982, without having any experience in this field. However, one must render its specialists their due. It proceeded energetically and was able to attract organizations from other ministries and departments and achieve financing for its research activities. In order to test experimental ceramic diesel engine cylinder and piston group items, YaMZ managed to build a bench and assembly complex based on the schema: "appraisal of air-tightness (porosity)—one-cycle testing on a gas driven assembly (dynamic shock)—multicycle testing on a one-cylinder compressor section with a maximum pressure of 10 MPa and a temperature of 770 K (500° C)—full-scale engine." The results obtained during this have permitted the serviceability of ceramic items to be evaluated based on the type of material and the technology of their manufacturing and the best of them to be selected for further testing.

Full-scale testing in a compressor chamber and in an engine have shown that the best are items made of material using silicon nitrides: Not a single case of their being damaged during testing was recorded although the operating time of the combustion chamber in the full-scale engine reached, for example, 160 hours. Material based on aluminum titanite (inserts in the gas passage) has been tested for the heat insulation of the exhaust manifold and head passages. YaMZ has also developed a technology for filling inserts with aluminum alloys and cast iron. Tests have demonstrated the prospects for work along this avenue and the Avtopromaterialy NPO [Scientific Production Association] has undertaken further work. Together with NAMI [Central Motor Vehicle and Motor Engine Scientific Research Institute], it is busy with revising the design of the turbocompressor's ceramic wheel made from silicon nitrides and carbides and has established the composition of the dross paste and the technological parameters for casting test items. A method for connecting the shank of the ceramic wheel with the metal shaft is being developed.

There has been progress in solving the problem of materials and also that of manufacturing flat lifters with ceramic elements. For example, tests of lifter ceramic plates on YaMZ benches with loads that exceed the nominal ones in the YaMZ-642 engine's gas distribution mechanism by 40 percent, have shown: Plates made of zirconium dioxides and silicon carbides, which are glued to the steel base of the lifter sleeve with the VK36A film-forming adhesive (the Shostkinskoye Svema Production Association produces it), operate reliably for

more than 500 hours; those made of silicon nitrides—1000 hours. Cams and lifters, which are made of silicon nitrides, practically do not wear out.

As is known, the requirements to contain the harmful substances in motor vehicle internal combustion engine exhausts have become much more strict during recent years. It is understandable that NIIATM cannot stand apart from this very important task. It is the institute's specialists who have been entrusted with solving the task of manufacturing unitized catalyst carriers for exhaust gas neutralization systems. Having thoroughly studied the problem, they prefer ceramics even here.

It has been shown during this: In order for a neutralizer with unitized ceramic catalyst carriers to become applicable for all the items produced by the ATS branch, one must master the technology of industrial production and begin the delivery of finely-dispersed ceramic powders with a given structure and chemical composition, arrange for the production of specialized technical equipment to manufacture ceramic items, and develop technologies for the full-scale mechanical processing of ceramics.

Thus, NIIATM (in coordination with many other organizations and enterprises, of course) has been able over the course of the seven years, which have passed since the beginning of the development of ceramics, to create a significant scientific back-log, work out the avenues for further research, and solve many practical tasks. That is why it would not be a mistake to say: The gap between the world's achievements in this area and the branch's results is becoming smaller with each day.

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## RAIL SYSTEMS

### First Quarter Rail Performance Statistics Issued 904H0188A Moscow GUDOK in Russian 24 Apr 90 pp 1-2

[Report based on materials from the USSR Ministry of Railways Statistics Administration: "The Sector's Work in the First Quarter"]

[Text] Railroad transport activity was complicated this winter not only by the weather conditions and the failures of technical facilities, but by interregional conflicts and strikes in a number of areas. Nevertheless, most of the mainlines operated steadily. Twenty railroads coped successfully with the plan for shipment of national economic output in the first quarter, both as a whole and for the majority of freight in the products list established. Of these, the Moscow, Moldavian, North Caucasus, Southeastern, Volga, West Kazakhstan, West Siberian, Central Asian, and Krasnoyarsk Railroads and others provided for fulfillment of the state order.

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At the same time, more than one-third of the railroads ended the quarter with considerable debt. Industrial enterprises and the Azerbaijan, Sverdlovsk, Kuybyshev, Kemerovo, and Far Eastern Railroads have lagged behind the most in fulfilling the plan. Some 3.3 million tons of various products less than planned were shipped in the first quarter to the country's industrial and agricultural enterprises and construction sites. This is equivalent to the system's operation for 7 hours. The lag in freight under the state order totaled 6.5 million tons (1.1 percent of the plan).

Targets for six of the 14 items established were overfulfilled. At the same time, underloading was allowed for chemical and mineral fertilizers, oil and petroleum products, lumber, and coal.

Shipments of freight under local plans were at a higher level. As a whole, more than 3 million tons above the plan were delivered. At the same time, shipments of agricultural machinery and motor vehicles were inadequate; during the period of mass preparation for sowing work in agriculture, this is fraught with negative consequences.

Analysis of transportation work in the first quarter shows that a trend toward correction of the lag has taken shape. The quality of plan fulfillment in accordance with the products list is also being improved. Thus, while the plan for 18 of the 42 items on the current products list was fulfilled in January, targets for 24 of the items were fulfilled in February and 29 in March.

The decrease in production of individual types of output compared with last year was reflected in the reduction of transport volume by 31 million tons. The shipments of coal, oil and petroleum products, fertilizers, lumber, and ferrous metals were reduced significantly.

**The static load plan** was met by most of the railroads, except for the East Siberian, Southeastern, Transbaykal, Far Eastern, Baykal-Amur, and Moscow Railroads.

**Unloading.** Every day 197,600 cars, or 3,700 cars less than the plan and 7,300 less than the corresponding period last year, were unloaded in the rail system. The Belorussian, Moscow, Southern, Dnepr, Donetsk, Volga, Kuybyshev, West Siberian, Kemerovo, Krasnoyarsk, and East Siberian Railroads have coped with the unloading target.

**The proportion of transport traffic run in blocks** was lower than the norm, dropping nearly 2 percent below the level last year. The most significant decline was in coal, oil products, ferrous metals, nonferrous ore and sulfur raw material, cement, granulated slag, agricultural machinery, lumber products, and freight for transshipment. An increase was registered only for iron and manganese ore, grain, and industrial raw material. As a whole, the target was exceeded by 220 kilograms and the first quarter of last year was exceeded by 240 kilograms.

**Freight turnover** reached 924 billion tariff ton-kilometers. This is 3.6 percent less than stipulated by the estimated target and 4.2 percent less than the corresponding period last year. The decline in freight turnover was caused both by the reduction in transport volumes as well as shipment distances. The plan for the January-March period was fulfilled only by the Baltic, Belorussian, Volga, West Kazakhstan, Central Asian, East Siberian, and Transbaykal Railroads.

**Passenger turnover.** The plan was fulfilled by 100.8 percent. There was an increase of 0.4 billion passenger-kilometers, or 0.7 percent over the first quarter of 1989. The plan for this indicator was fulfilled by 22 railroads. At the same time, the Baltic, Moldavian, Donetsk, North Caucasus, Azerbaijan, Transcaucasian, Southeastern, and Volga Railroads not only did not cope with the plan, but reduced volumes compared with the period last year.

The quality of passenger transportation was not improved, either. Fulfillment of the passenger train traffic schedule declined by 0.5 percent for departures, totaling 93.5 percent, and 1.1 percent for arrivals, reaching 86.2 percent. Fulfillment of the departure schedule became worse on the Gorkiy, West Siberian, Southern, Transcaucasian, and Azerbaijan Railroads.

Shortcomings in day-to-day work, a decline in the reliability of technical facilities, and an increase in breakdowns related to this on a number of railroads had an adverse effect on the use of rolling stock. In the system as a whole and on most railroads, difficulties in local operations and in moving the flow of railcars resulted in more time in freight handling and technical operations and had an adverse effect on fulfillment of the car turnaround plan and other qualitative indicators.

**The railcar turnaround time** in the system as a whole was slowed down by 3.2 hours; 2.2 hours of this resulted from a reduction of 3.4 kilometers in the average daily travel time. At the same time, the collectives of a number of railroads and divisions were able to achieve results that were quite good. The planned target for car turnaround was fulfilled on the Southwestern, Dnepr, Donetsk, Volga, Central Asian, West Kazakhstan, South Urals, and Krasnoyarsk Railroads. On these same railroads, except for the last one, as well as on the Odessa, North Caucasus, Transcaucasian, and Kuybyshev Railroads, the turnaround time was speeded up compared with the same period last year.

**The average weight of a freight train** was 40 tons less than during the same period last year and 112 tons less than the normative target. The Belorussian, Far Eastern, Transbaykal, Kemerovo, Alma-Ata, Odessa, Lvov, and Moldavian Railroads are lagging behind significantly in this indicator (over 100 tons under the plan and 70 tons less than last year). Only the Baykal-Amur Railroad exceeded the norm by 82 tons and last year's level by 260 tons. Train weight was increased by 60 tons on the Transcaucasian Railroad, 44 tons on the Tselina Railroad, and 2 tons on the West Kazakhstan Railroad. A

decline in train weight and average daily distance traveled by locomotives has led to a reduction of 1.8 percent in locomotive productivity.

In the first quarter, 88 percent of the freight trains departed the stations where they were made up on schedule. The level of departure schedule fulfillment decreased by 0.6 percent compared with last year, with a reduction of 14,800 freight trains dispatched. Departure schedule fulfillment became worse on 16 railroads. Through passage by freight trains according to schedule and with less delays reached 75.8 percent, which is higher than the level for the first quarter last year. Through passage according to schedule was improved on 17 railroads.

The thrifty use of fuel and energy resources is the focus of attention among the mainlines' collectives. In the January-February period, 25 million kilowatt-hours of electricity and 94,000 tons of diesel fuel, or 0.3 and 3.8 percent, respectively, of the actual consumption, were saved in train traction. However, a number of railroads allowed overconsumption, as a result of which 2 million additional rubles were spent by the Ministry of Railways.

**Enterprises of industrial rail transport** carried 1.5 million tons of freight above the plan since the beginning of the year. Compared with this period last year, loading increased by 0.9 percent. Unloading remained at the previous level. However, individual associations, including those in Kemerovo, Vladimir and Leningrad, did not fulfill the transport plan. The Moscow and Groznyy associations have not raised the level of regularity in freight operations, and the Volgograd, Moscow, Tyumen, Novosibirsk, and Kazakh associations have not reached the norms set for car layovers.

**The metros.** In the first quarter, more than 1.46 million passengers, 5.1 percent above the planned target, made use of their services. At the same time, there was a decline in service on the Baku Metro. Additional receipts from above-plan transportation and savings in operating funds provided 7.8 million rubles in above-plan profit for basic activity. The target for labor productivity was overfulfilled by 13 percent.

The production of nonfood consumer goods in the first quarter corresponds to the pace stipulated in the state order. Goods valued at 43.3 million rubles were turned out, exceeding the plan by 14 percent. Plants of the TsTVR [Rolling Stock Repair and Spare Parts Production Main Administration], the "Soyuzhedoravtomatizatsiya" NPO [Scientific Production Association], and the TsRS [expansion unknown, probably an abbreviation for a headquarters main administration, possibly Workers Supply MA] are responsible for three-fourths of the above-plan output. At the same time, not all transport enterprises have coped with the target. Thirteen railroads have not fulfilled the plan; the Far Eastern, Azerbaijan, South Urals, Donetsk, Sverdlovsk, and West Siberian Railroads, as well as individual plants, were responsible for the most nonfulfillment.

Cooperatives manufacturing consumer goods are operating efficiently at many enterprises. Since the beginning of the year they have turned out goods valued at 7.4 million rubles. This is 17 percent of the overall production volume for the sector. In the first quarter, paid services valued at 904 million rubles were provided for the public, which exceeds the target that was set. Compared with the same period last year, incomes were increased both for passenger transportation and the provision of general types of paid services.

The volume of capital investments under the plan for economic and social development from all sources of financing declined by 0.2 billion rubles compared with last year's level. With respect to the limited funds allocated for capital construction, their efficient utilization is a high-priority task. However, we have not coped with it in the first quarter. In the January-March period, 19.8 percent of the annual limit of centralized capital investments, including 20 percent in capital construction, were utilized. Transport enterprises and organizations spent 4 percent less of their own funds on capital construction than last year.

Construction and installation operations valued at 480 million rubles, or 18.5 percent of the annual limit, were completed. The construction and installation operations being conducted on the Azerbaijan, Southern, Volga, Kuybyshev, Kemerovo, and Krasnoyarsk Railroads are extremely unsatisfactory.

Technical reequipment and renovation of existing enterprises required 31.6 million rubles of centralized capital investments and 314.4 million rubles of the enterprises' own funds. The total volume of capital investments for these purposes was increased by 16 percent over the first quarter last year.

The acquisition of new rolling stock and containers cost 630 million rubles, and 30 million of this amount was in state capital investments. Compared with the first quarter last year, the expenditure for these purposes was reduced because less new freight cars, mainline diesel engines, and electric locomotives were delivered.

With an increase of 81 million rubles in the funds allocated for housing construction, 7 million rubles less were utilized than in the first quarter last year. At the same time, 14 railroads were able to increase the volume of this construction. While the railroads in more severe climates, such as the Krasnoyarsk, East Siberian, Transbaykal, and Far Eastern Railroads, made use of up to 23 percent of the funds from the annual plan for housing construction (with an average level of 17.2 percent for the system), the Southern Railroad used just 9.4 percent, the Transcaucasian Railroad used 9.9 percent, and the Azerbaijan Railroad made use of 11.9 percent.

With regard to the decline in the use of funds to build facilities for nonproduction purposes, less projects in the social area have been commissioned. From all sources of financing, 3,764 new apartments with actual living space of 216,000 square meters have been put into use in the

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rail system in operation and on the BAM [Baykal-Amur Mainline]. The housing commissioned was 8,400 square meters less than in the same period last year. The Southern, Azerbaijan, West Siberian, Kemerovo, Krasnoyarsk, and Baykal-Amur Railroads did not meet the target set for commissioning housing in the first quarter.

For the construction of production facilities, 90 million rubles of state capital investments and 268 million of enterprises' own funds were utilized (except for the BAM); this amounts to 25 percent and 16.2 percent, respectively, of the annual limit.

**Plants in the sector** decreased industrial output in the first quarter by 0.2 percent compared with the same period last year. The level of fulfillment of contract commitments for deliveries also declined. Every fourth enterprise did not cope with the commitments made. The output not delivered is valued at 9.8 million rubles, which is twice the level of the first quarter last year. With the work force reduction, labor productivity has been increased by 4.6 percent. The volume of nonfood consumer goods produced has been increased.

Every third plant of the TsTVR has violated contract discipline, and altogether 21 enterprises owe products valued at 4.4 million rubles, which is 45 percent of the total volume of output undelivered under contracts in the sector. The Ulan-Ude LVRZ [Locomotive and Railcar Repair Plant], the Astrakhan Diesel Engine Repair Plant, the Ishim Machinery Plant, and the Moscow "Krasnyy Put" Machinery Plant have lagged behind the most. The plants of other administrations and associations, except the Electric Rolling Stock Repair Plant of the Moscow Metro, have coped with the commitments made.

Compared with the first quarter last year, the number of freight cars released from major repair has been reduced by nine of the 14 TsTVR plants. The Barnaul, Ordzhonikidze, Stryy, and Tselinograd plants have not coped with the plan. The output of electric locomotives was reduced by six of the nine plants, and the Chelyabinsk and Yaroslavl plants did not cope with the plan. The output of diesel locomotives was cut back by 11 of the 15 plants, and only the Orenburg plant did not fulfill the plan.

**The labor productivity of workers** employed in transport rose by 1.6 percent over the plan in the first quarter. But it declined by 4.5 percent compared with last year's level, both because of the increase in the work force and the decrease in transport volume. Twenty railroads coped with the target set for this indicator. Productivity rose over last year's level only on the Baykal-Amur, Volga, West Kazakhstan, and Central Asian Railroads.

The Azerbaijan, Transcaucasian, North Caucasus, and Alma-Ata Railroads lagged behind the most in reaching the target for this indicator. On these railroads, labor productivity was lower than the level last year, mainly because of the decline in transport volume.

The number of trips with work violations and prolongation increased on 15 railroads in the first quarter. This occurred the most on the Southern Railroad—5.5 times as much, and three times as much on the West Siberian, Krasnoyarsk, and Far Eastern Railroads.

The lag in fulfilling the plan for freight transport and a number of the other most important technical-economic indicators of the sector's work has had a negative effect on the production cost of transport. It is 2.3 percent higher than planned.

The Ministry of Railways has analyzed the results of rail transport work in the first quarter. An expanded session of the collegium outlined specific steps to rectify the shortcomings without delay and mobilize all reserves to make up for the indebtedness incurred.

#### Leningrad Freight Handling Problems Reported

904H0135A Moscow PRAVDA in Russian  
6 Feb 90 Second Edition p 6

[Report by PRAVDA correspondent V. Gerasimov: "A City in a Blockade of Abundance Brooks No Delay"]

[Text] *Leningrad—History, it has been noted, has a tendency to be repeated. In our time of destiny, as they are calling it, its repetition is often depressing, unfortunately. The disorganized economic mechanism and the system of collective irresponsibility which replaces its pitiful remains are multiplying the holes in the empty public purse.*

Once again, as in the fall, the tracks of the Leningrad transportation hub are choked with rolling stock carrying different freight. At the end of last year 15 trains with containers were standing idle on the approaches to the city.

The stations' freight yards and sidings turned out to be filled with more than they could hold as it was. Some 1,796 containers have been accumulated at the Vitebsk-Tovarnaya station, 1,058 at the Moskovskaya station, 298 at the Finlyandskaya station, and 190 at the Maritime Port. Each day vehicle drivers have been hauling out only about 150 containers from the Vitebsk-Tovarnaya terminal, the largest in the Leningrad hub.

The city is in a blockade of abundance, we may say; it is as if it has choked in the flood of goods. Thousands of cars and containers have been put out of circulation. The people have not really tasted the foreign pie, which is not free for the country: long lines have increased at the doors of the stores. The crowds of speculators showing their hand right here have been becoming more obvious and common to Leningrad residents.

"With our overall lack of organization, we are capable of turning even profitable business into losses," I. Zayats, chief of the Leningrad-Vitebsk-Tovarnyy station lamented, as I recall. "In establishing the terminal, the Ministry of Railways proceeded from the requirement of an increase in capacities of 8 to 10 percent per year. The

stock of equipment has practically not been renovated or modernized. But we are being overloaded with the arrival of containers here. The worn-out equipment has not been able to stand such a load..."

"And there is nothing to haul them away in," A. Zorin, the manager of the transport production association of the Leningrad Gorispolkom, noted here. "The motor column which serves the terminal has not received one truck tractor in recent years. Drivers are shying away from this work..."

Apart from the disorder in the freight yards themselves, this is what has humiliated the people—the clients themselves have avoided any concern like the devil avoids incense. They have not had to speak about organizing round-the-clock delivery, especially on their days off, with their attitude toward the business. At the same Vitebsk-Tovarnaya station they cited several examples to confirm this. Under an arrangement with the manager of the "Drezden" firm store, they sent two containers of furniture there. They promised to accept it before 2000 hours. The vehicles arrived at the address at 1700 hours.

"Never set foot here any more!" the store's loaders told the drivers.

And it must be said that they lost the habit. It appears that it is not only at this store. At that time they were asking the customer to pay a price 1.5 times higher, and sometimes twice as high, for a suite of imported furniture. Now, it is rumored among the experts, they never "arrange" for less than double price.

"We appealed to 70 regular clients who received imported goods," A. Zorin said. "Help the transport workers whenever possible, we pleaded, to unload the containers with your own facilities. Only one of them responded."

Poverty has come to the city, and the food allowance has become more meager with each day, but 88 containers of dried milk for the milk combine have been on the sidings. Some 1,200 tons of detergents for the "Lenkhoz-torg" have not been moved. The "Lenpishchekombinat" has not found time to pick up the groats, sugar, and pepper delivered for it. The transport workers have not been counting on the responsiveness of republic offices responsible for accepting products in the first place. For 3 days 21 cars of fish and 54 cars of meat have not been unloaded. At the cold storage facility where they should be accepting this food without hindrance, the unloading area has been shortened for some reason. Instead of 16 cars, the "Lenkhladokombinat" has been processing only 13; cold storage facility No 4 has been handling seven cars instead of nine, and the fourth and fifth cold storage facilities have been accepting two cars each instead of eight. The situation has been no different at the "Gosoptprodtorg" and "Rosgalantereya" bases.

Garment workers have not picked up a container of artificial furs from the station for the "Bolshevichka" for

nearly 3 months. A container with half-finished footwear has been held on the "Skorokhod" for 3 days. Careless freight consignees have been paying fines for the excessive layovers of rolling stock, of course. But after all, you cannot make a coat or boots out of them. The situation that has taken shape has showed that a major city is not prepared to receive the large influx of freight that has been pouring out because of the lack of coordinated actions by three departments: the Ministry of Foreign Economic Relations, the Ministry of the Maritime Fleet, and the Ministry of Railways.

Before the New Year, for example, the Leningrad militia conducted a raid on two major trading centers—the Gostinom and Apraksinom yards. They arrested 300 persons for selling goods at unauthorized places and for speculation at the same time. Most of those who like easy profit from goods have proved to be those who have not reached the customer in the official way, but who have gone after him by the crooked path of the shady business operator.

I wrote to the newspaper about the failure to unload containers in the Leningrad hub at the same time: after all, apart from the 15 trains with containers at stations in the city and the oblast, over 3,000 cars and tank cars have been standing idle! But the report, despite all the declarations about the need to criticize negative occurrences, was not destined to be published. Why? Before this, PRAVDA had carried critical photo reportage from the Moscow hub, where the situation was even more disgraceful. What is more, publication under the headline "Sabotage?" created anger in the capital. In seeking to refute the facts, they applied pressure on the editorial staff with all the weight of titles and regalia, and demanded a denial. Nothing came of this: you cannot conceal thousands of motionless cars!

But they have held back reporting from Leningrad a little, all the same. After all, there are few who have managed to stand up to the opposition of official ambition, invested with considerable power in addition. Sometimes one pays more dearly to come into conflict with the authorities: you cannot get at the truth, and you get hurt in spite of the pluralism. Well, what about the work, for the sake of which you take up the pen, if only in an attempt to help it. Without the intervention of the mass media, without making public what is miserable and unpleasant for someone, the matter is not set right, as we see, it just suffers. After all, in the fall various commissions and staffs held meetings. Decisions were made and extraordinary steps were taken in the Leningrad Soviet. Slowly and with effort, the work made headway. True, the communists in the "Ravenstvo" Association adopted a decision during the difficult days: act! Every day 25 to 30 persons were coming to the Finlyandskaya-Tovarnaya station at their own initiative on their days off to unload the cars. No followers for them have been found.

There is a traffic jam on the October Railroad again. Some 3,340 cars and tank cars are now standing idle in

the city and the oblast, and 423 of them contain meat and dairy products which are missing so much in the stores. Four cars with imported footwear have not been unloaded for 2 days. More than 200 cars are waiting for consignees' consent to accept them at the Shushary station. And all kinds of goods are in them—medicines, fur, paper, carpets, washing machines, and lumber... Over the past 3 months the container situation seems to have improved. And what is more, the tide of imports has become noticeably shallower. On the whole, it continues to be an unhappy picture—the count of idle cars being unloaded and those that are unclaimed is going into the thousands! The fines that were increased by five times as much (!) by railroad workers are not speeding up their movement along the crooked path of irresponsibility, either. Some 4,690,289 rubles were taken out of negligent clients' cash drawers last year alone. Plus 4 million from drivers for keeping goods in freight yards too long. Consequently, these funds have also been lost to the local budget as well. And henceforth these expenses must be increased by five times as much. The city's residents are paying for the businessmen's lack of conscientiousness in the final analysis—with the houses that are not completed, the dining halls that are not equipped, the premises that are not attended to at their children's kindergartens and nursery schools.

It remains an open question: who needs and profits from the disorganized tracks in a transport system where the cars are spinning their wheels! One thing is clear—the situation is not giving much concern to the managers of those enterprises which should be organizing two-shift work for unloading in an extreme situation. Their responsibility, which has eroded worse than before in spite of all the assurances of devotion to perestroika, is only impairing its practical acceleration.

#### North Caucasus Railroad Thefts Cited

904H0135B Moscow TRUD in Russian 6 Feb 90 p 4

[Interview with Lt Col of Militia A. Laskovets, chief of the Department to Combat Criminal Encroachment on Freight of the North Caucasus UVD [Internal Affairs Administration] in Transport, by TRUD correspondent A. Isayev: "Boarding the Rolling Stock"]

[Text] Rostov-on-Don—There were three thefts of particular magnitude, that is, ones in excess of 10,000 rubles, committed on the North Caucasus Railroad in 1986. Last year there were 33. And there were other thefts, and the number of them has increased as well, from 42 to 108. These stolen "withdrawals" have cost the state, and consequently us, 2.3 million rubles. But what is the situation now?

"Five such major thefts were recorded in January," says Lt Col of Militia A. Laskovets, chief of the Department to Combat Criminal Encroachment on Freight of the North Caucasus UVD in Transport.

[Isayev] What was the reason?

[Laskovets] The large number of abandoned trains. Sometimes the number reached 400, especially during the days of the well-known events in the Caucasus, when the movement of through trains was essentially stopped. On 22 January, for example, there were 198 such trains, but only 49 were guarded. That is, they were under the care of station employees. But they have enough worries of their own. As a result, on a siding near Kizlyar, 1,420 motor vehicle wheels valued at over 101,000 rubles were stolen from just one car. An investigation located the guilty persons.

Attempts to steal freight most often occur on a "red" [signal], when a train is standing before a semaphore when it enters a station. This is where the criminals jump onto the rolling stock, break open the cars and containers on flatcars and disappear with the "loot." In our opinion, the Belorussian method that was declared to be progressive at one time has not served us well in this matter—you will recall that staffing was reduced, but not always justified, in the interest of economy. They also reduced the number of guards accompanying the rolling stock.

And they are not looking after the freight very well at the stations, either. In this regard, I cannot help but reproach the managers of the Makhachkala, Groznyy, and Mineralnyye Vody Divisions of the railroad. Their commercial inspection points are working in a formal manner, and damage to cars, containers, and the freight itself is seldom brought to light. The freight yards are not fenced off and they are poorly equipped...

Unfortunately, railroad transport employees themselves have been involved in the thefts as well. At the Alda station near Groznyy and in Armavir, acceptance inspectors and those engaged in making up the trains have been pilfering goods from cars and containers. A group including train make-up men, a locomotive engineer, and a switchman were operating boldly right at the Georgiyevsk station... They would drive a car onto a siding, rob it, and return it to the consist. They were carrying off boxes of sugar, detergents, towels, cigarettes, and baked goods...

Lack of control has become common. Freight may be stolen somewhere at the beginning of a line, but the loss will be discovered only at the end of it. At the Kamenolomni station, for example, they were missing 200 imported men's coats valued at 15,800 rubles in one of the cars. Where was a car which had passed all through Rostov Oblast from the Ukrainian side broken open? We are looking.

The fact is that there must be a very thorough check of arriving trains at railroad junctions. We call these screens. But they do not always willingly allow our representatives at the Illovaysk station on the Donetsk Railroad, for example. They think that the matter of organizing such screens must be decided at the level of the Ministry of Railways and the Ministry of Internal Affairs.

Another point should be mentioned: the provisional committees to combat criminal activity in the North Caucasus region are not devoting enough attention to the transport militia and its equipment. This relates primarily to the Dagestan, Kabardino-Balkar, Chechen-Ingush, and North Ossetian Autonomous Republics and Stavropolk Kray. This is precisely where most of the train robberies occur.

We remember when a train was stopped for about an hour at a red signal on the Dudarovskiy siding near the city of Ordzhonikidze, unidentified criminals boarded a car, unloaded 63 television sets, and escaped. But since the trains often have to make such stops here, our coworkers decided to set up an ambush on the siding. They waited until the thieves finally arrived. And...they did not arrest them: the criminals opened fire, then dashed into a car waiting for them, and that was the last we saw of them. But our coworkers had nothing in which to pursue them; they went about the operation on foot, because there was no vehicle transportation. They do not even have the usual two-way radios to notify militia posts in the vicinity.

In short, these are the reasons why robberies are spreading in transport. And how they are spreading! It was noted in the last report from the USSR Goskomstat [State Committee for Statistics] that thefts in railroad transport increased by 1.7 times as much last year. So we will not be left without work, it seems. Unless a number of steps are taken, of course.

#### January Rail Safety Statistics Issued

904H0148A Moscow GUDOK in Russian 22 Feb 90 p 2

[Article from materials of the Traffic Safety Main Administration of the Ministry of Railways: "Traffic Safety—January"]

[Text] The traffic safety situation deteriorated sharply in January, as compared with the preceding month. There were 12 wrecks (3 in December) and 5 accidents (1 in December), including 4 with passenger trains. No passengers suffered in the accidents. Since the beginning of the year there have been emergency situations on the road network practically every day.

The reason for the wreck on 1 January was a break in the rails on the Arkhangelsk Division of the Northern road. An emergency situation occurred on the North Caucasus road on 3 January through the fault of the locomotive brigade, which had fallen asleep. The wreck on the Azerbaijan road on 6 January happened because a car brake beam fell off. A break in the wheel pair axle journal of a tank car on 9 January led to the derailing of the tank car, which hit a passenger train on the Kazan Division of the Gorkiy road. On the Petrozavodsk Division of the October road on 12 January, 11 cars were smashed, and the reason was—a break in the rails. Some 17 cars were derailed on 13 January on the Saratov-Rtishchevo section of the Volga road, again because of a break in an axle journal.

The wrecks that occurred on 22 and 23 January on the Kuybyshev road not only paralyzed the main line, but also affected the work of the entire network. On 22 January, on the Penza-Syzran section, the two end cars of the up train that derailed disturbed the clearance of the adjacent track. This led to a collision and the derailment of another 23 freight cars on the down train. Traffic was completely stopped for 19 hours. The trains had not yet started off, when at 0500 on 23 January, there was another emergency situation on the adjacent Ruzayevka Division. On the Bezdovodka-Kuzovatovo open line, the locomotive brigade of the October depot found itself in a critical situation. The train which it was operating, after passing a lineside signal with a green light, collided with the end section of a freight train standing in front. As a result, 15 cars derailed, and there was an 18 hour interruption in traffic. It was established that in the occupied block-section, the lineside signal light had showed green because of an error made by the workers of the Inza section of signalization and communications when installing the decoding cell.

The safety situation in STsB [signalization, centralization and blocking] has recently become critical. In the fourth quarter of last year, its workers were to blame for two wrecks. The situation in January was no better. On 9 January, at the unguarded crossing of the Zaporozhye-Levoye station of the Dnepr road, a single locomotive ran into an emergency truck for the contact-wire system. Three persons were killed. A defect in the automatic signal system for the crossing led to the misfortune. On 13 January, a defect in the automatic crossing signal on the Balashov-1—Balashov-passenger open line of the Southeastern road—was the reason for a train running into a motorbus, and people were also killed in this incident.

Railcar safety has not been satisfactorily ensured, either. Two wrecks involving freight trains occurred: on the Azerbaijan, the reason was a brake beam falling off and on the Volga—a break in the axle journal. Derailments of rolling stock in trains have become more frequent. There were 19 of them in one month. The number of potentially dangerous defects, such as a break in a wheel pair axle journal, has risen. Moreover, of the 19 breaks, 13 happened to the roller bearings because of a violation of the technology of installing the axle units.

In locomotive service, there was a wreck and 11 instances of going through stop signals. Brigades of the Donetsk and Tselina roads went through twice. Locomotive damage constitutes most of the wastage in the service, and has brought serious difficulties to the work of the network. The greatest amount of damage has been on the Alma-Ata, October, Transbaykal and West Kazakhstan roads.

The drifting of unsecured cars has become more frequent, through the fault of the transport workers. One of them—on the Central Asian road—ended in a wreck that caused the death of the locomotive brigade. Cars on the

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Donetsk road have "drifted" three times. There were two instances each on the Alma-Ata and Far Eastern roads.

The highest accident rate, as before, is in the track service. Five wrecks and three accidents occurred in January through the fault of the track workers. Freight train wrecks on the Northern, East Siberian, October, Tselina and Moscow roads were caused by breaks in the rails. An accident occurred for the same reason on the Southeastern road—a car derailed on train No 289, Aktyubinsk-Moscow line. The press of snow under the rail base, leading to the expanding of the rails, caused the derailment of 11 cars on train No 50, Leningrad-Murmansk, on the Petrozavodsk Division of the October road. The irresponsibility of the workers of the Korschunikh-Angarskoy track section was the reason for the serious wreck on the Bratsk Division of the East Siberian road. On 7 January, on the Chernaya-Sokhatyy open stretch, because of a break in the rails, the end car, loaded with ore, of a freight train derailed, because it violated the clearance of the adjacent track. As a result, an electric locomotive and 30 cars loaded with coal derailed. The assistant engineer was injured. Some 170 meters of track were destroyed, and the contact-wire system was seriously damaged. Traffic on the section was stopped for over 6 hours.

The frequency of traffic safety violations is a cause for alarm. On the October road, for example, in 1989, four wrecks occurred on the track installation: three because of a break in the rails and one because of the pressure of snow and expanding of the tracks. On 12 January of this year, on a single-track open line, Nig-Ozero-Myanselga, of the Petrozavodsk Division (Kondopozhskay track section), freight train No 2047 was wrecked. Some 12 cars, loaded with apatite concentrate, derailed and had to be taken out of inventory. Train traffic was stopped for almost 13 hours. The reason for the wreck was a break in the rails.

Almost four days after this accident, on the line section where it occurred, the state of the track had not been checked. On 16 January, at 0220 hours, on the same line section, but on the adjacent open line, Nig-Ozero-Kondopoga (460th kilometer), 11 cars on the fast-train Leningrad-Murmansk service derailed. The passengers, fortunately, were not hurt. The reason was the same—unsatisfactory track maintenance.

To explain this accident, B. Sosnov, road foreman writes: "...the daily track patrol on the 460th kilometer did not reveal snow pressure, and indeed, it was difficult to detect it, since the curve was covered with sand and apatite. The underside of the head should be beveled daily, but there is no one to do it. There are 9 persons on the line section instead of 30. We manage to eliminate only the grossest violations. The bolts often come out, and there is nothing to replace them with. Not a single anticreeper has been received in six years, and the track is 'tearing apart.' Capital repair is long overdue. It is practically impossible to ensure train safety under these conditions."

One of the items of the order of the October road chief on the wreck of train No 2047 and the accident of the passenger train, said: "Comrade Novosadov, track service chief, is to solve the problem of providing the track section with a kilometer reserve of rails and with the materials necessary to fulfill the urgent work. Track service workers are to be sent to the defective sections to give assistance."

Do not these phrases, constantly quoted from order to order, unsupported by either materials or people, conceal the roots of the recurring reasons for the traffic safety violations in the track installations of the October road? And not only on this road.

In January, a wreck occurred on the Arkhangelsk Division of the Northern road because of a break in rails, laid on the track in 1986, which had put through scarcely more than one-third of the proposed tonnage norm. The workers of the Maloshuysk track section calmly watched the destruction of the rails, restricting themselves to issuing routine warnings on reducing speed. Some 17 cars were derailed as the result of the accident.

The point is that they have virtually ceased checking the state of the tracks on the section. Because of the shortage of operating staff, almost half of the rail-inspection cars stand idle. There is no kilometer reserve of rails. On some line sections the fitter staff is only 25-30 percent complete. There are not enough brigade leaders. Track work in the division is often done without issuing a warning and the appropriate protective barriers.

The Maloshuysk junction has been unable to solve social problems for a long time. There is a housing shortage, and because of the chronic malfunction of the heating system, the housing and office facilities are cold.

In investigating the wrecks, Comrade Skidan, chief of the division, made the MPS strictly responsible for all this.

## MARITIME AND RIVER FLEETS

## Minister Comments on Maritime Fleet Performance

*904H0142A Moscow VODNYY TRANSPORT  
in Russian 10 Feb 90 p 1*

[Interview with Yu.M. Volmer, minister of the Maritime Fleet, by L. Yermakova, TASS correspondent: "The Fruits of Maritime Cost Accounting"]

[Text] The report of the USSR State Committee for Statistics on the development of the country's national economy last year notes the complexity of the economic situation and the underfulfillment of the plan with respect to many very important indicators. At the same time, measures directed toward structural perestroyka of the

economy were implemented. Among the sectors where these changes are being actively carried out and yielding positive results is maritime transport. Yu.M. Volmer, minister of the Maritime Fleet, at the request of a TASS correspondent, comments on the results of this work.

[Volmer] The seamen have transported everything that was agreed upon. In addition, about 8 million tons of cargo above the yearly plan were delivered. I will not indulge in figures to excess, but I will mention two indicators that are exceedingly important for the sector and for the country. Some 260 million rubles of additional profit were obtained, and 130 million foreign currency rubles were earned.

[Yermakova] The perestroyka of the economy presupposes the growth of independence for the sector and the enterprises. Can the seamen's success be linked to this process?

[Volmer] We were among the pioneers of the transition to the new conditions of economic activity as early as 1986. The management structure of maritime transport was modernized and many of the functions of the central apparatus were turned over to the shipping companies and enterprises and on this basis, their independence in solving economic problems was expanded.

A very important factor is increasing the rights to independent conduct in foreign economic operations, and this is furthering the development of initiative and the possibility of economic maneuvering.

I will give an example. The sector's "sore spot", as the past few years have shown, is the aging of the fleet. The average age of world ships is 12.4 years, and of ours—15 years. Over one-fourth of them have reached a critical milestone—over 20 years. The necessary updating of the fleet is not taking place, however. Since the beginning of the five-year plan, we have failed to receive from the ship-builders 51 of the motorships planned, with a deadweight of about 500,000 tons. What can we do? We cannot wait, and complaining does not help. We have decided to make use of the opportunity offered by the transition to full cost accounting. Specifically, by selling obsolete transport on the foreign market, we acquired, on credit terms, 72 ships with a deadweight of about 2 million tons. In this case the loan is being paid for from funds obtained from operating these motorships. Formerly, it would have been difficult to solve this type of problem.

Another sign of economic independence is the creation of joint ventures. The ministry's Council for Coordination of Foreign Economic Relations realized the expediency of permitting the activity of about 20 such mixed enterprises. Among them are associations to produce maritime computer systems, to clean and paint ship hulls, to service LASH systems and to organize ferry service. Our companions will be firms from England, West Germany, Finland, the United States, Japan and Vietnam. A Soviet-Norwegian shipping company is already in operation.

I emphasize also, that in the four years of work under the new conditions we have directed about half a billion rubles to the economic incentive fund, through above-plan profits.

[Yermakova] The alarming tendency of labor productivity to lag behind the rise in wages is noted. How do things stand with the seamen?

[Volmer] The labor productivity growth rates in the fleet and at the ports since the beginning of the five-year plan have exceeded those planned by a factor of four. This means our conscience is at rest: we receive only what we earn.

[Yermakova] It was noted in the report of the State Committee for Statistics that directing investments to the social sphere had become a priority.

[Volmer] This is also characteristic of our sector. Last year the funds for the development of the social sphere increased by one-third. About 100 million rubles were switched over from production to housing-everyday construction in carrying out the programs for "Housing", "Health" and "Children". Almost half of the construction-installation work in the sector is carried out precisely for the social-everyday complex.

By utilizing all resources, including currency withholdings, we have continued to develop the construction industry's own base for the Far Eastern region. A house-building combine and a brickyard are being built at the Port of Vostochnyy. Contracts are being concluded to supply analogous plants for the Southern and Northwestern basins, as well as lines for the production of scarce plumbing hardware and carpentry items. The purposeful actions of the shipping companies, ports and plants have made it possible, in the four years, to virtually ensure fulfillment of the assignments of the five-year plan for introducing housing. All the same, the situation remains complicated in most of the basins. We are counting on the active assistance of the construction ministries and local Soviets, particularly in the Northern and Eastern regions.

Our enterprises have produced over 26 million rubles worth of consumer goods. We could also buy them on the foreign market, through the additional fleet transport services. This is also the result of expanding the independence of the enterprises.

[Yermakova] According to information from statisticians, the turnover of the country's foreign trade rose during the year. This is obviously not without the participation of maritime transport?

[Volmer] Of course. Let us not forget that most of our boundary is maritime. This means that the fleet delivers over half of the country's foreign trade cargo. I remind you that ships flying the Soviet flag have laid a path to over 1000 ports in 120 countries. Our motto is: the sea does not separate, but unites the mainlands and the State.

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[Yermakova] Many people are worried about the queue of unloaded ships in the ports, and the containers piling up at the moorings....

[Volmer] Transport has recently been often accused of poor work. The roots of this lie deeper, however. I would name two causes. First of all, the uneven purchase of imported goods in the course of the year. This also leads to uneven arrivals and to the fleet piling up in the ports, the potentials for which, as you realize, are not without limit. In the second place, the wave of strikes and the blockade of railroad transport in the Transcaucasus led to serious irregularity in the delivery of railcars and containers to the ports.

Unfortunately, our port workers are not yet doing everything to coordinate operations with related workers at the transport junctions. The measures taken by the seamen and the railroad workers, however, made possible a noticeable release of "tension" in January. We hope that we will succeed in maintaining the rates taken on.

[Yermakova] Yuriy Mikhaylovich, six months ago you were approved for the position of minister at a session of the USSR Supreme Soviet with an excellent score—with two "against" and five abstentions. Does the trust of your deputies influence your activity?

[Volmer] Unquestionably. After all, approval of the program for the sector's development was expressed. It makes it obligatory to defend the positions promulgated from the rostrum, and to hold firmly to a course toward making the economy healthy and toward independence and initiative in this matter, which is extremely important for all of us.

In conclusion, I wish to emphasize that we have succeeded in uniting the efforts of the shipping companies, ports and plants, and on the basis of coordinating their work, in increasing the discipline and responsibility of the collectives for achieving good work results at sea and on shore.

### Ship Repair Facilities Lacking

*904H0142B Moscow VODNYY TRANSPORT  
in Russian 6 Feb 90 p 2*

[Article by G. Belinskiy, chief of the Kaspromorniprojekt Ship Repair Yard Development Department: "Narrow Specialization with a Plus"]

[Text] In the last few years the maritime fleet has carried out quite a few measures which should increase the efficiency of ship repair. Among them can be mentioned the construction of new enterprises, complete or partial renovation of existing ones, reequipping of shops and sections, introducing the comprehensive problems of ASU [automated control system], new forms of labor organization, etc. At the same time, ship repair affairs are not being set right. Quite the contrary: its specific cost has risen, the rates of reducing the repair time budget have slowed down, the ships' provision with replacement-spare

parts, repair of special devices and electronics is lagging behind, and the currency expenditures have increased—in a word, the gap between needs and potentials continues.

You cannot call the present situation of ship repair enterprises anything but a crisis situation. There is one way out of it: revise the organization-production structure of industry in the ministry, at the same time changing the methods of planning the work of the SRZ [ship repair yard]. The goal is to make the transition from multi-products list production to narrowly specialized production. The very idea that a transition to new technology and new technical devices requires a revision of the organizational and production structure in the ship repair industry as a whole has been completely rejected. This has led to the ministry's ship repair yards maintaining this structure unchanged for the last 40 years. There are solid grounds for concluding that not one of the problems, including the task of producing consumer goods, will be solved without restructuring the sector in this direction at all stages of management. It is appropriate to note that the main paths to this perestroyka have already been tried out by the enterprises of the Ministry of the Maritime Fleet and other related sectors.

Implementing the structural changes stipulates, first of all, working out a new system for specializing the ship repair enterprises. Introducing new methods of planning and organizing the work is the conclusion of this stage in restructuring the ship repair industry.

Differentiating the existing enterprises entails a clear-cut demarcation of the production capacities engaged in ship repair, ship building, machine building and consumer goods production. It is a question, not of demarcation within the limits of a single plant, but of redistributing the functions on the sectorial level. Basin or regional associations with a target purpose can be created.

For example, ship repair, dock and machine building production, unified for all the SRZ, is assigned within the Kaspromorsudoremont SPO. Each of them should have a new organizational and production structure, suitable for solving more specific and narrower problems.

Creating these production entities will not, of course, solve all the problems unless the organizational structure is changed on a higher level, as well as the system of planning the work of the new formations. Ship repair enterprises in the basin should be covered by the rights of the production units and the operations associations (shipping companies, SRZ, BTO) with all the functions of technical operation and ship repair turned over to the association.

At the same time, the enterprise funds should be formed in accordance with the profit of the new association (in consideration of the profit of the shipping companies). This reorientation will make it possible to restructure

SRZ toward reducing the growth rates of expenditures for repair instead of constantly increasing the amounts.

New forms of ensuring the technical state of the ships, systems of continuous inspection, guaranteed service, etc., can easily be incorporated within the framework of the proposed system. The chief criterion of the system is the interest of the enterprises in reducing the expenditures of the association. The lower the expenditures for repair and the faster the ships are repaired and high quality is ensured, the greater the profit for the association as a whole, and as a result, the greater the funds of the enterprise. The experience of a number of analogous associations in domestic industry has confirmed the high degree of efficiency of this system.

Machine building, ship building and other enterprises should be integrated into the new organization-production structures. The most efficient form is to set up departmental associations directly under the jurisdiction of Glavsudomekha. For example, machine building and machine repair associations should include the head plant assigned for this purpose, let us say, the Berdyansk plant, as well as some of the capacities of the existing ship repair enterprises. A firm of its type is formed to repair ship equipment and manufacture replacement-spare parts (including those for reconditioning), the tasks of which are to provide the ship repair industry with completing items in the required amounts and products list. The existing capacities at the SRZ can be turned over to the machine building association on leasing principles. There are analogies of these associations in the Ministry of the Fishing Industry for electrical construction and diesel repair shops.

Finally, ancillary enterprises, producing consumer goods, means of mechanizing port and ship repair work and special equipment, should constitute a separate group of plants.

Integration systems are, of course, the initial stage of work on creating new systems of specialization within the limits of each new association. For this purpose, the products list and types of work performed by specialized production facilities should be examined, having as a goal the potential of setting them apart and singling out independent specialized subdivisions, ensuring the possibility of using new technology and advanced equipment.

Serving as an example of these developments are the automated sections pre-cutting metal for the group of ship repair enterprises; analogous sections manufacturing standard parts of ship systems, mechanized sections repairing hatch closings and manufacturing flanges. Robotic complexes may be used in mechanical working to machine replacement-spare parts of DVS and other items. The YuzhNIIMF [Southern Scientific Research Institute of the Ministry of the Maritime Fleet] and the KMNIIP [not further identified] have drawn up technical designs for the creation of these production facilities, but they can be carried out only when the first stage of work to create the new organizational systems is

carried out. Naturally, other, intermediate stages may be specified in the process of developing these systems.

The concluding stage of reorganizing the industrial structure should be working out a clear-cut system of cooperation between the enterprises on the vertical and on the horizontal, ensuring the stable work of all the enterprises together. The proposed version cannot be realized all at once—this process is a long one, possibly for a whole five-year plan, but it is actually substantiated by the work experience of the Kaspmorsudoremont SPO, as well as by that of enterprises of related sectors.

#### Chief Interviewed on Murmansk Shipping Company Development

904H0151A Moscow VODNYY TRANSPORT  
in Russian 24 Feb 90 p 2

[Interview with V. Beletskiy, chief of the Murmansk Shipping Company, by S. Parshikov, VODNYY TRANSPORT correspondent: "The Sector's Interests in the Arctic"; comment by VODNYY TRANSPORT]

[Text] The collegium of the USSR Ministry of the Maritime Fleet recently discussed the program for social-economic development of the Murmansk Maritime Shipping Company for the period up to the year 2005. V. Beletskiy, chief of the shipping company, tells our correspondent about some of the aspects of it that pertain to replenishing the fleet and developing the shore base.

"As we know, a considerable part of our fleet is already, unfortunately, in its declining years. Therefore, when drawing up the program, we took as a basis," said Vsevolod Vladimirovich, "what we considered to be its realistic supply in the 13th Five-Year Plan, as well as the necessary updating in the 14th and 15th five-year plans. In a word, we looked far ahead, so that, not today, but in the future, we would completely provide for the need for transport. The tendency is to stabilize it throughout the period under discussion at a level of 8.3 million tons a year."

"At the end of the 13th Five-Year Plan, however, this volume is to be reduced to 8 million tons. This is because the transport of Spitzbergen coal to Murmansk and Arkhangelsk is not being fully developed due to the insufficient number of ships of the Dzhanka type. Therefore, if the MMF [Ministry of the Maritime Fleet] makes a positive decision on the problem of ordering SN-8 type ships, three of them will have to be assigned to the Murmansk Shipping Company, upgrading the design to UL class."

"Furthermore. We will take on supplying the settlements of the Kola Peninsula. Here too, all-purpose ships with a deadweight of 1300 tons, of the Vavchuga type, must be added to replace those built as far back as 1962."

"The navigation and weather conditions of the delivery settlements located in the southwestern Karsk Sea, the

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coast of Yamal (particularly the mouth of the Ob) and on the shores of the Yenisey Gulf, make it impossible to use ships larger than SAS-10 ships. Therefore, we have decided to write off the four Pioneers, not in the 13th, but in the 14th five-year plan. I think that the MMF should return to the problem of building SO-5S ships."

[Parshikov] We know that the Murmansk Shipping Company has a sort of monopoly of the nuclear-powered fleet, which, incidentally, is being constantly supplemented. I know that for a long time there has been talk about turning this fleet over to another boss. What do you think about this?

[Beletskiy] In the interests of the sector, the entire nuclear-powered icebreaker fleet should be on the balance sheet of the Murmansk Shipping Company. I will explain why. In the first place, we are so far the only ones with personnel capable of operating these ships which are without exaggeration the most complex in the engineering sense, as well as of organizing technical service of the nuclear power units and giving the practical training to specialists in APPU operation. In the second place, we are so far the only ones in the sector who have developed and are operating a repair-technological enterprise for the nuclear-powered fleet and the Leningrad Nuclear Training-Simulator Center.

As for the replenishing, in the 13th Five-Year Plan, we should get the nuclear-powered icebreaker Oktyabrskaya Revolyutsiya and the Ural. Now we are estimating. If the volumes of Arctic transport in 1988 were fulfilled by four nuclear-powered icebreakers, then the 1990 volumes will be ensured by six, and given the prospect of stabilizing the plans of the 13th Five-Year Plan at the level of 1990, there will be eight of these icebreakers.

[Parshikov] This is given the fact that the transport volumes, as you yourself noted at the beginning of the interview, will be reduced to 8 million tons. There will turn out to be an excess of icebreakers. Perhaps no more have to be built?

[Beletskiy] It seems to me expedient for the Main Economic Administration, Glavudemekh, the Nuclear-Powered Fleet Administration, Glavflot and the Northern Maritime Route Administration, drawing in Soyuzmorniiprojekt, the TsNIIMF [Central Scientific Research Institute of the Maritime Fleet], DNIIMF, the Murmansk and the Far East shipping companies to define precisely the program for icebreaker construction in the period up to the year 2005.

Here is another thing—it would be more sensible to use them in all the Arctic regions in the traditional navigation period, and in the winter—to operate on the Far Eastern basin with the appropriate redistribution of quotas for tonnage dues between the Murmansk Shipping Company and the Far East Shipping Company.

I will not speak at this time of the critical social tension now forming in the icebreaker fleet, particularly on the

nuclear-powered icebreakers. This is not a problem of the future, it is a problem of today, requiring an immediate solution.

[Parshikov] Vsevolod Vladimirovich, what sort of role is assigned in the program to the ports of your shipping company? Have perspectives been outlined for their development? What can be said about reinforcing the repair base?

[Beletskiy] There are perspectives. The development of the ports is determined in consideration of stabilizing the cargo-processing in the Northern basin at a level of 6.5 million tons. At the same time, I will note that no significant construction projects are specified at the ports during the period under discussion.

Capital investments in port facilities will be directed primarily toward improving the infrastructure and renovating the mooring lines and transshipping complexes. Construction of berth No 5 at the Port of Kandalaksha is directed only toward linking the capacities of the fleet and the shore.

The same thing is also true of the construction of the No 3 block of shops at the Murmansk Ship Repair Yard. Its development, with simultaneous reinforcing of the TOF [fleet technical division] shore base, will make it possible to satisfy the need of the shipping company fleet for repair by the year 2005.

It seems to us necessary, and this has been reflected in the scheme, to develop more actively the repair-technological enterprise of the nuclear-powered fleet through centralized capital investments, in order to complete the technological cycle of the complex connected with the storage, processing and utilization of liquid and solid radioactive wastes. This will above all make possible a considerable improvement in environmental protection. The present level of storage and safety of liquid radioactive wastes and spent fuel "assemblies" (at floating technological bases) provokes, it cannot be denied, the justifiable and more and more often repeated censure of the public.

[Parshikov] The ideas that you are talking about raise no doubts, but colossal funds will be needed to implement all the thoughts and plans. Where can you get them?

[Beletskiy] We have not lost sight of this problem. A shortage of funds in our shipping company will develop only in the 13th and 15th five-year plans, through the arrival of the nuclear-powered icebreakers. We feel, however, that because their construction, as well as that of icebreaker-transport ships, and the development of the Atomflot RTP [radio-engineering post] will be carried out to obtain a national economic effect, centralized financing of the capital expenditures listed must be maintained or a further increase in cargo transport tariffs in the Arctic be specified.

In our opinion, in order to increase the efficiency of the Arctic Maritime Transport System (AMTS) there must

be an association of all the users of this system. It should be an association into which, in particular, the Murmansk and Far East shipping companies could enter, and it would have under its jurisdiction the ports, YaPOMT, the Norilsk Nikel concern, the Severovostokzoloto Association, Goskomgidromet, the appropriate administrations of the Ministry of Defense and other departments operating in the Arctic region.

[Parshikov] You have probably already estimated the basic functions of this association, since you are more interested in its creation than anybody else? If you can, designate them briefly.

[Beletskiy] Certainly. It is, primarily, coordinating the periods for delivering cargoes on the North Sea route, organizing their delivery in direct and mixed service from the consignor's warehouse to the consignee, approving the traffic schedule for the means of transport and introducing modern technology for transport and cargo transshipping. The association must work out jointly tariffs and commercial terms for transport and think about how best to use the container fleet and expensive RORO ships. Construction of warehouses and transshipping complexes and financing of housing construction programs are to be based on cooperation.

[Parshikov] The last question. What decision was made by the collegium of the MMF after discussion of your program of socioeconomic development of the shipping company?

[Beletskiy] It agreed with many of our conclusions. On the whole the idea of replenishing the fleet and reinforcing the shore base before the year 2005 was approved.

[Parshikov] Thank you for the interview.

#### When the Issue Was at the Proof Stage

After a brief stay at its port of registry, the new nuclear-powered Sovetskiy Soyuz, having replenished its water and food reserves, left Murmansk for its first working run to the Arctic. Its ice watch will last to the end of the year. On board the nuclear-powered ship are quite a few specialists and workers of the Baltic Shipbuilding Yard, where the icebreaker was built. They are taking part in ice tests of the ship. In the Karsk Sea, the Baltic workers will transfer to downstream transport and return home.

The Sovetskiy Soyuz is the sixth nuclear-powered ship. It replaced in the Arctic, as we know, the veteran of the domestic nuclear-powered fleet—the icebreaker Lenin, which was taken out of operation at the end of last year. (TASS)

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